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TITLE OF THESIS..AN EVALUATION OF THE EFFECTIVENESS
OF AUDIO-VIDEO IN-HOUSE SALES TRAINING
FOR REAL ESTATE SALES PERSONNEL.

UNIVERSITY.....UNIVERSITY OF ALBERTA.....

DEGREE FOR WHICH THESIS WAS PRESENTED.....M.B.A.....

YEAR THIS DEGREE GRANTED.....1976.....

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THE UNIVERSITY OF ALBERTA

AN EVALUATION OF THE EFFECTIVENESS OF AUDIO-VIDEO IN-HOUSE SALES TRAINING ON REAL ESTATE SALES PERSONNEL

by

JAMES RONALD MITCHELSON

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF BUSINESS ADMINISTRATION

FACULTY OF BUSINESS ADMINISTRATION AND COMMERCE

EDMONTON, ALBERTA

FALL, 1976

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled AN EVALUATION OF THE EFFECTIVENESS OF AUDIO-VIDEO IN-HOUSE SALES TRAINING ON REAL ESTATE SALES PERSONNEL submitted by JAMES RONALD MITCHELSON in partial fulfilment of the requirements for the degree of Master of Business Administration.

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Supervisor

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Date.....May 14, 1976.

ABSTRACT

This thesis deals with the effects an experimental audio-video in-house sales training program had on real estate sales personnel. In an initial attempt to gain some background on this question, an empirical study was carried out on a pilot test basis in which twenty-five real estate salesagents participated. Audio-video equipment was chosen for the study as a result of conversations with real estate sales managers from several firms. This method of training was used because it was easy to use and easily understood by salesagents. An intensive training course was presented to the salesagents over a five-week period. The changes in the salesagents responses to questionnaires was measured by the use variables. The variables used in measuring the changes were the residual of many initially discussed with real estate sales managers. There were two one-hour sessions a week for five weeks resulting in ten training periods. The study analysed sales performance in terms of two major concepts: the number of listings obtained; and the number of sales made. Results suggest that salesagents feel that the present methods of training are not sufficient. In fact, many agents expressed the view that sales training courses should be available on a continuous and regular

basis. Statistical analysis further suggests that such training would do much to improve the sales performance as well as the image of the professional realtor. Accordingly, it is concluded that if more training of a similar type were available to individual agents, such training could be expected to have a positive effect on their performance. Many interesting relationships were found in the course of the study. For example, the amount of training received by an agent showed a strong relationship to sales performance as measured in this study. The results in general strongly suggest that real estate companies and the industry as a whole would benefit greatly by implementing audio-video in-house training programs on a continuous and systematic basis.

ACKNOWLEDGEMENTS

The author wishes to acknowledge the help of a number of people without whom this task would never have been completed. The author sincerely thanks Dr. P. Michael Maher for his direction, encouragement and patience throughout this project. Dr. H. Clifton Young is much appreciated for his special help during the questionnaire preparation, and his assistance with the statistical methodology. Thanks also go to Professor D. J. Weideman for making useful recommendations which improved the final product.

The patient help of the consulting staff at the Computing Centre is also gratefully acknowledged. Their advice was invaluable in the statistical analysis of the study.

Thank you to the managers and staff at the participating real estate firm for their cooperation and support in this project. A special thanks to all the salesagents who voluntarily gave of their own time to participate in this study.

The author wishes to gratefully acknowledge the work of Mrs. Vivian Wenger who patiently and accurately typed and retyped this manuscript.

Mr. John Sleek and the staff at the audio-visual department were exceedingly helpful in the preparation of films for viewing, and the B. C. Real Estate Association is acknowledged for providing some of the films used in the research.

Finally I wish to thank my wife for her continued encouragement throughout the past years at University and my parents for instilling in me the qualities necessary to accept this challenge and to persevere to completion.

The research was partially supported by the Alberta Real Estate Association.

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CHAPTER 1

INTRODUCTION

Introduction

Many of the larger firms in many industries in the modern business environment have developed sophisticated techniques for the training of their personnel.[1] In some industries training is extremely specialized by function, and in other industries training is of a more general nature. Training techniques in business take many forms. These techniques may include seminars, films, audio presentations or combinations of any or all of these. The content of such programs may include information on product knowledge, motivation, sales training, and/or interpersonal communications.

The general purpose of training in industry is to improve some input component or operational aspect of the business in order to achieve a higher level of efficiency or profitability.[2] Implicit in any discussion concerning training is the knowledge that it is the human element which is expected to change as a result of these programs. Personnel are expected to adapt the skills presented during training sessions to their work, thereby improving their efficiency.

The high management expectations for training programs can be demonstrated by the wide spread use of sales training courses as a basic part of the introductory processing of sales personnel.[3] Sales training is visualized as an integral part of the learning process and is expected to generate successful results in sales.[4]

The use of training programs in industry is now commonplace.[5] Many major industries such as the data processing industry and the steel industry have developed comprehensive training programs for use by sales and managerial staff.[6] Some of these packages are offered in multi-company groups but more often they are presented in smaller single firm groups.[7] Given the widespread use of these programs, it is perhaps somewhat surprising to note that such an important and dynamic industry as real estate has spent little effort in researching and developing comprehensive training programs. Many of the programs which do exist are often experimental in form and limited in scope.[8]

For an industry which is involved with the growth of all communities in Canada, effects all levels of government and is involved with consumers making a major life style commitment, very little has been done to research and improve its training methods.[9] Accordingly, a great need exists to begin a series of empirical tests to evaluate the effect of various training programs

on firms comprising the real estate industry.

Background

The real estate industry has traditionally been confronted with a large number of personnel lacking any standard and comprehensive training program.[10] Of the thousands of men and women attracted to this industry, most, by the industry's own admission, lack the desired degree of professional training.[11] To date, most firms in the industry have not provided sales agents with an opportunity to benefit from a well organized and coordinated program of training. Indeed, studies in the past have not attempted to assess the importance of sales training to firms and employees of this industry because of the lack of sales training programs.[12] Accordingly, the quality of service provided to the ultimate consumer varies considerably.[13] It is this variation in service which has in part at least caused the development of negative attitudes toward real estate sales personnel and the industry as a whole.[14] While it is true that all provinces in Canada have adopted a regulatory real estate licensing system, it is not true to extrapolate from this that these licensing systems are producing well informed professional sales personnel. A large percentage of any given firm's sales staff still enter the industry with only the licensing examinations as an introduction.[15] This is particularly true with respect to

the smaller independent real estate companies who lack the resources to provide a comprehensive training course for their sales staff. Further, the industry has had a history of having portions of the sales force involved in part-time selling.[16] These people are not able to develop or maintain any high degree of competence since they are frequently unavilable for any training which might be provided. As previously stated, these and other problems have caused the public to frequently question the level of professionalism and competence of sales personnel in the real estate industry. It is essentially this lack of any consistent degree of professional training within the real estate industry which has provided the focus for this study.

A study completed by Richard J. Long in 1973[17] measured some variables affecting the sales performance of real estate organizations. Long categorized these variables into nine exploratory statements:[18]

Exploratory Statement 1:

Organization structure has a significant impact on an organization's sales performance. Some of the relevant dimensions of organization structure are number of sales offices, number and type of supervisors, specialization and number of salesmen, and the territorial policy of the firm.

Exploratory Statement 2:

There are certain characteristics of the sales office that affect sales performance. The characteristics to be examined include location, length of time at that location and proximity to competitors.

Exploratory Statement 3:

Working conditions have a significant effect upon sales performance. Variables relevant to working conditions that will be studied include type of office provided for the salesmen and general working conditions.

Exploratory Statement 4:

The amount of sales support provided by an organization has a significant effect on sales performance. Relevant variables to be examined are advertising, supervisory and secretarial assistance, use of sales aids, and frequency of sales meetings.

Exploratory Statement 5:

The type of compensation policy applying to salesmen and sales supervisors affects sales performance. Relevant variables include commission rates, bonus schemes and use of contest and prizes.

Exploratory Statement 6:

The training policy of the organization significantly affects sales performance. Extent of formal courses available and on-the-job training procedures are among the relevant variables here.

Exploratory Statement 7:

The nature and extent of evaluation and control procedures affect sales performance. Relevant variables include use of formal reports, use of quotas and goal systems and personnel evaluation procedures.

Exploratory Statement 8:

Personal characteristics of the sales staff affect sales performance. Relevant personal characteristics include age, sex, education, marital status, and sales experience.

Exploratory Statement 9:

Work habits of the sales staff affect sales performance. Relevant variables include number of hours worked, time allocation, amount of planning and selling techniques.

While the emphasis in Long's work was on the organization, three of the exploratory statements were

applicable to this study where the emphasis has been placed on the salesagent. Statements 6, 8 and 9 affect the performance of the individuals as well as the performance of the firm. Training Policy, Personal Characteristics and Work Habits are factors which can be affected by an in-house training program. The positive or negative changes which might occur in these factors would provide much useful information regarding training programs. Thus, the work by Long provided much valuable data for this study and as a background document it provided an adequate bridge from the case of the organization to the case of the individual. Only the variables which might be affected by an in-house training program have been incorporated into this study. The other variables which are affected by the organization have been left for others to study.

Purpose of the Study

The purpose of this study was to determine if there were any positive benefits which might accrue to real estate salesagents as a result of providing them with an intensive audio-video in-house training program. The real estate salesagents involved would be tested to determine if their activities and performance could be substantially effected as a result of the experimental training program. This proposition was both important and testable. By providing a program of audio-video in-

house sales training to a selected group of real estate salesagents which includes information on their products, communicative abilities and the various means of organizing their time more effectively, these salesagents should be able to perform more efficiently and provide an improved level of service to their clients.

There were at least two ways to measure the effectiveness of a sales training program. The pragmatic approach would have been to measure the changes in remuneration and unit sales over an extended time period. Another approach would have been to measure the changes in the attitudes of the salesagents toward their firm, industry and themselves. It has been shown in the literature that positive changes in attitudes eventually manifest themselves in positive changes in sales and remuneration.[19] In this study the emphasis was placed upon the latter approach to evaluating sales training. The major reasons for this approach were the availability of information and the resources available at the time of the study.

With the development of audio-video playback equipment and the convenience offered by such systems, firms in many industries have developed practical in-house sales training programs. Typically, these programs require standard amounts of time for a number of sessions depending on the structure and content of the courses. It was the purpose of this research to attempt to

evaluate this type of system for the real estate industry. More specifically, this research attempted to evaluate an audio-video in-house sales training program on a selected group of real estate salesagents over a five week period of time. It was anticipated that this training program would have a positive affect on the individual salesagents sales performance.

The use of audio-video methods was only one of several ways to present a sales training program.[20] It was however, an extremely convenient and effective method of presenting information to a group. This method had the added advantage of allowing the researcher the opportunity to preview all the material and select only that information which would be most useful to the course. Further, this method allowed for consistency of presentation and helped to keep the focus of the audience on the subject matter. For these reasons an audio-video in-house sales training program was chosen for study in this research.[21]

Statement of the Problem

As previously noted, the objectives of this research were to measure the effectiveness of audio-video in-house sales training programs on real estate salesagents. The problem encountered in research of this nature was to find relevant instruments and scales for the measurement of data. In this case, the problem was

to establish a means of measuring changes in an individual's behaviour or attitudes over time as a result of the stimulus provided by the audio-video training package.

In order to more easily conceptualize the problem, it was rephrased into research questions. These research questions indicated more clearly the kind of questions which were examined in this study. The principle research question was:

> Can an audio-video in-house sales training program influence the sales performance of real estate salesagents?

The problem of measuring sales performance was partly definitional. A basic premise of this study was that sales performance can be measured in the real estate industry by the number of listings obtained and the number of sales made. This premise was developed as a result of conversations with the managers of several Edmonton real estate companies and numerous salesagents. While the percentages of each factor noted above changed from firm to firm, these two components were what ultimately described sales performance in the real estate industry. Therefore, the research question was restated in two parts:

1. Can an audio-video in-house sales training program influence the number of sales made by real estate salesagents?
2. Can an audio-video in-house sales training program influence the number of listings obtained by real estate salesagents?

The Conceptual Hypothesis

The conceptual null hypothesis of this study could have been stated in one of two general forms. The form most widely used in statistical analysis is to set the null hypothesis to zero or to express that no change will occur as a result of administering a stimulus.[22] While this format may be more mathematically convenient, due to the nature of the research it was not used in this study. The conceptual hypothesis was intended to provide a clear overview of the structure of the research and should not be confused with the operational hypothesis which is presented in the next Chapter.

In the aggregate, this research tested a number of variables to determine their effect on real estate salesagents. Since it was generally simpler to describe this research in positive statements, the following conceptual hypothesis was developed:

Ho: The administering of an audio-video in-house sales training program will have a positive affect on real estate salesagents.

This conceptual statement of the hypothesis provided a description of the research outside of the constraints of statistical analysis. It was designed only as a description of the framework and was not tested. Rather, a more mathematically workable hypothesis will be stated in Chapter 2.

Assumptions and Definitions

In all research there are some assumptions and definitions which are integral to the study. In this analysis there was at least one major definition and one major assumption.

The major definition which was developed for this research stems from a need to measure "sales performance." As stated earlier, sales performance was defined in the real estate industry as the number of sales made and the number of listings obtained in a given time period. Each individual salesagent was dependent upon these two factors for his remuneration. However, sales performance was in no way intended to be equivalent to total job performance. Since this research was micro in scope, the question of how total job performance is affected by training programs must be left for other investigators. Sales performance was chosen as an indicator for the effects of an audio-video in-house sales training program because of its immediacy to salesagents (i.e. in remuneration) and its convenience for measurement.

The major assumption was associated with the above definition. It was assumed here that: ceteris paribus, the salesagent who sells more homes and obtains more listings will have a better sales performance than the salesagent who sells fewer homes and obtains fewer listings. This assumption is necessary to avoid

criticism regarding the size and types of sales or listings. In conversations with several real estate managers, this assumption was found to be a relatively accurate description of actual sales performance.

A further assumption was made concerning the input stimulus (training program). It was assumed that this program provided information on the various propositions being tested. That is, when the stimulus is intended to affect one proposition, it does in fact accomplish that result. Without this assumption, changes which might occur might not be the result of the stimulus and would have had to be discarded from the study as irrelevant.

A more general assumption must be made concerning the selection of the propositions as outlined in Chapter 2. They were assumed to be important aspects in the measurement of sales performance. They represent the residual of ten factors initially discussed with salesagents and real estate firms.[23]

These statements represent the major assumptions and definitions made in this research. Any procedural assumptions and definitions were noted where appropriate.

Scope and Limitations

The scope of this research is narrow. It focuses on the real estate salesagent and the effects of audio-video in-house sales training upon him. The

results of the research will provide an indication of the effects of sales training on real estate salesagents. The study was limited for several reasons. The financial constraints of assembling and setting-up an audio-video in-house training program were substantial, and the physical properties of the equipment precluded easy transportation for further study. The sample used in this study was limited by the facilities available and was therefore quite small.

One major limitation in the study was regarding the compensation of salesagents. Compensation would normally be expected to have an effect on a salesagents performance. However, compensation was not studied in this research since it was considered to be uncontrolable. That is, compensation is controlled by the firm and not by the salesagent. Though it was not analysed, the compensation of salesagents imposes a constraint on this research by discounting remuneration as a means of measuring sales performance. Instead, sales performance was measured by two proxy variables as outlined in Chapter 6.

The findings of the study were based on changes in the participants responses to questions. Basically these changes were qualitative in nature, being a reflection of attitudes. More will be said about this type of analysis in the section outling the operation hypothesis.

The greatest limitations of this study were imposed externally. Financial resources were limited, and the time available for the study of this problem was also limited. The sample studied in the research was restricted by the size of facilities, the type of video equipment and by the fact that participation was voluntary. The more operational constraints are noted in the appropriate sections throughout the paper.

Outline of the Paper

The research is presented in a sequence which follows a logical progression and allows a meaningful analysis of the problem.

Chapter 2 provides a description of the mechanical procedures used in the study. It outlines the specific hypothesis and how inferences will be made about them. Research instruments are described in terms of formulation and scaling techniques. The sample size is deliniated and the procedures used in collecting and evaluating the data are provided.

Chapter 3 contains a summary of the answers to the salesagents general questionnaire dealing with property listings. Frequency distributions of responses are provided and the relationships between basic parameters and variables are discussed. The information is presented in such a way as to make clear the affects of the training provided.

Chapter 4 is similar to Chapter 3 except the descriptive data concerns sales.

Chapter 5 contains an evaluation of the variables within each of the five basic propositions. These relationships show how well the variables describe each proposition. As well, this chapter provides an analysis of the results of relationships which exist between any of the variables in the study.

Chapter 6 contains an analysis of how the propositions relate to sales and listing performance. Each of the variables in each proposition was correlated with a listing and a sales performance indicator to determine the extent of the relationship.

Chapter 7 evaluates the Salesagents Film Questionnaire. This section shows the attitudes of the salesagents as they change (or do not change) over time. Further, the analysis shows how strongly the sales personnel felt about the effectiveness of its value to the industry.

Chapter 8 outlines the results of a paired respondent analysis. The effects of the training were evaluated using a review of the same questionnaire at two separate time points. These relationships were then evaluated using the Wilcoxon[24] statistic.

Chapter 9 provides a brief summary and overview of the research and significant points are outlined.

A review will be made of the hypotheses and the results in this section to discover the effectiveness of the research. The conclusion of this research also briefly outlines directions for further study.

CHAPTER 2

DATA COLLECTION AND EVALUATION

Introduction

The initial procedure followed in this research was to hold informal discussions with several real estate salesagents, managers and sales supervisors.[25] The results of these conversations were incorporated throughout this study. Some of the most important findings resulting from these conversations concern the terminology used, and the units studied in this research. For example, the term "salesagent," which was used throughout, was a result of these conversations. Salesagents described themselves as agents for a company but working for themselves. "Salesagent" was the most accurate description of the occupation in their view and has therefore been incorporated into this research.

The basic premise of this study was that sales performance could be measured by the number of sales made and the number of listings obtained. This was also a reflection of the information gained from such meetings. Similarly, the propositions were decided upon as a result of these conversations. Information gained in this manner was noted where appropriate.

Research Methodology

The basic research methodology employed in this study was to measure the changes in a selected group of sales people over a period of five weeks. The participants in the study were a voluntary group of real estate salesagents. The group was asked to actively participate in a concentrated in-house audio-video sales training program designed to affect their knowledge, behaviour and attitudes. The training course was comprised of five basic film units each viewed twice by the sales personnel. The audi-video program included demonstrations of selling techniques, product features, systems for organizing work activities, and instruction concerning the development of communicative skills and self-image. As mentioned, these five input units were chosen for this research after consultations with real estate personnel.

These input units were rephrased into propositions. There were five propositions for each of the two major contributors to sales performance: Listings and Sales. These propositions were selected for study because they were the ones considered to be the most important, the most easily controlled, and the most easily measured. Further, these factors were selected because a training course of this duration had limited scope for input and these factors were deemed to be

some of the most critical.

All propositions used in this study were intended to measure the sales performance of the individual salesagent. Therefore, factors affecting the performance of a firm were not included. The list of propositions studied in this research does not preclude the existence of others of varying degrees of importance.

The concept which underlies this study is shown graphically in Figures 1 and 2. Figure 1 shows the five propositions which have been chosen as input units to affect sales performance. Figure 2 illustrates the process involved in the research. The lines represent input from films over the five week training period.

FIGURE 1

INPUT VARIABLES FOR SALES PERFORMANCE

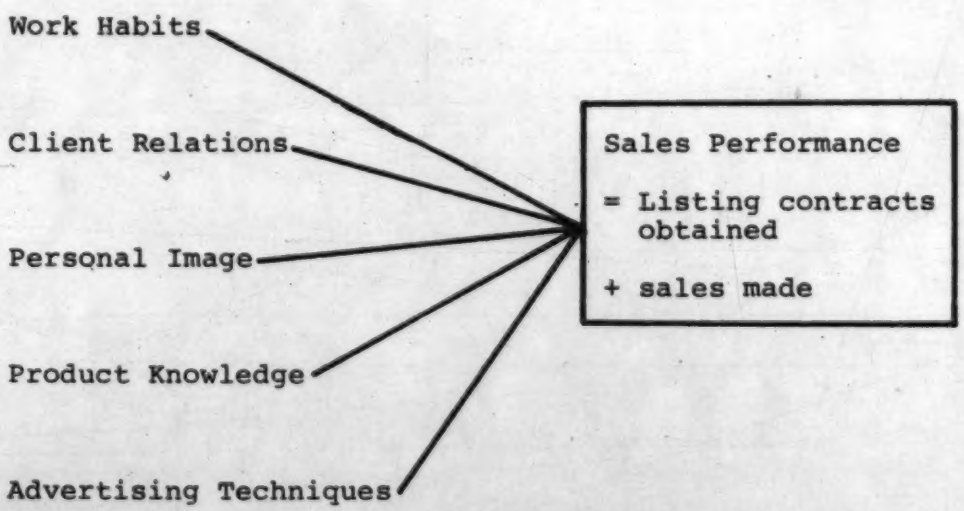
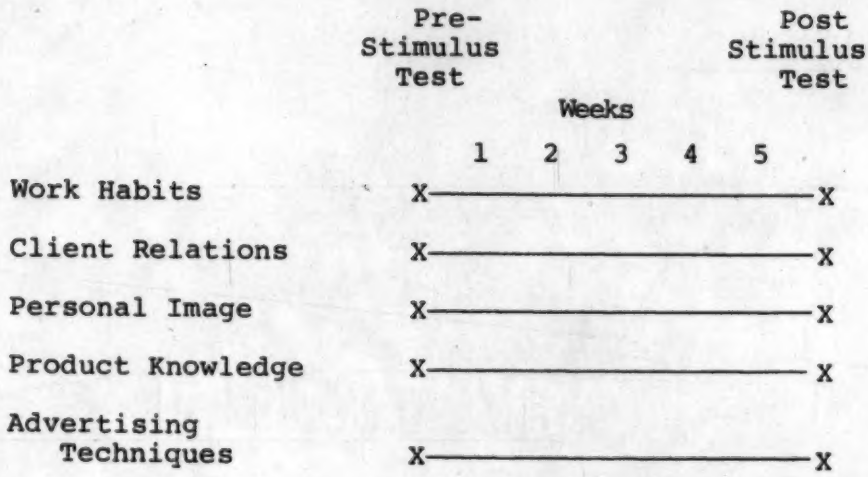


FIGURE 2

ILLUSTRATION OF RESEARCH DESIGN



In short, the general research methodology may be described as follows:

An in-house sales training course based on audio-video material was designed to affect these various input factors. Subsequently, the effect on sales performance of the individual salesagent was measured by monitoring the changes which occurred in attitudes or behaviour. These changes were recorded with the aid of questionnaires and evaluated with the use of non-parametric statistic.

The Operational Hypotheses

If the conceptual hypothesis concerns itself with the more general statement of cause and effect, the

operational hypothesis must therefore be concerned with a more precise definition of the factors and variables involved in the study. As outlined in Chapter 1 the basic research question was concerned with the affect of in-house audio-video sales training on sales performance of the individual salesagent. Since the term sales performance has been defined as listings plus sales, the basic research question was broken down into these two components. Similarly, in defining operational hypotheses from the basic hypothesis it was again necessary to describe the research in terms of these two components.

The hypotheses in this section were structured in a more mathematically workable form than was the conceptual hypothesis described in Chapter 1. The null hypotheses were designed to express no change as a result of the rest of the hypotheses. Therefore, the rejection of the null hypotheses would provide an indication of a positive effect on the sales performance of an individual salesagent.

H_o: An audio-video in-house sales training program will have no effect on the sales performance of individual salesagents.

H_{o1}: An audio-video in-house sales training program will have no effect on the number of listings obtained by individual salesagents.

H_{o2}: An audio-video in-house sales training program will have no effect on the number of sales made by individual salesagents.

In empirical research of this nature it is normally difficult to gather reliable data concerning the sales activity or remuneration of sales personnel. Therefore, another method had to be found which would yield inferential data concerning the two secondary hypotheses.

The hypotheses were therefore grouped into sets and subsets of descriptive statements which were measurable. The propositions were not intended to be exhaustive. They were merely a reiteration of the five factors expected to influence sales performance stated in a more pragmatic fashion and appropriately divided into listings and sales.[26]

The hypotheses were restated as research statements which were tested by the use of propositions.

Basic Research Statement (H_o):

Audio-video in-house sales training affects the sales performance of real estate salesagents.

Secondary Research Statement 1 (H_{o1}):

Audio-video in-house sales training affects the number of listings obtained by real estate salesagents.

Secondary Research Statement 2 (H_{o2}):

Audio-video in-house sales training affects the

number of sales made by real estate salesagents.

Each of the secondary research statements contains five propositions regarding the performance of the individual salesagent. The propositions and an explanation of each are listed below:

Proposition 1: Work Habits Affect Listings/Sales.

The work habits of individual salesagents should have an effect on listing and/or sales performance. If the work habits of a salesagent can be improved, then his listings and/or sales should increase, and the increase should be measurable.

Proposition 2: Client Relations Affect Listings/Sales.

The relationship a salesagent has with a client should have an effect on listing and/or sales performance. If relationships can be improved it should be reflected in an increased number of sales and/or listings.

Proposition 3: Personal Image Affects Listings/Sales

The opinion a salesagent has of himself, his company and the industry should have an effect on his sales performance. A positive attitude to employment should be reflected in increases in the sales and listings obtained by a salesagent.

Proposition 4: Product Knowledge Affects Listings/Sales.

The knowledge an agent has regarding his products should have an effect on his sales performance.

If the sales agent's knowledge about his products can be improved, then sales performance should improve accordingly.

Proposition 5: Advertising Techniques Affect Listings/Sales.

The choice a salesagent has regarding advertising techniques is wide. The use of one or more advertising techniques should have an effect on sales performance. If the most effective advertising techniques can be determined, and the salesagents are allowed to use these techniques, then the salesagents should be able to improve their sales and/or listings.

Propositions 1 through 5, listed above, were measured by the variables outlined in Table 1 of Appendix 1. This table shows the relationship between the propositions, the variables and the research instrument.

Research Instruments

The results of this study are based on data gathered through the use of a series of questionnaires. This method of investigation allowed a fast and straightforward method of gathering and categorizing relevant information. The preparation of the questionnaires was done after the propositions had been stated and the objectives of the study had been determined. Because of the type of study it was necessary to design

a set of research instruments which would provide data appropriate for evaluation.

Four questionnaires were developed. These questionnaires followed two general formats and were designed as follows:

1. Salesagents General Questionnaire: This instrument was the primary vehicle for gathering data for this research. It was designed to gather data regarding the salesagent's work habits, product knowledge, self-image, relationships with clients and advertising techniques. The focus of this questionnaire was on the opinions of the salesagent. The responses were to be the individual's perception of the questions asked and not his perception of the attitudes of the company or industry. Space was provided for comments and several open-ended questions were included to draw out a diversity of responses. This was done because the questionnaire relied heavily on closed-end questions.

The questionnaire was administered before and after the training program for all participating sales personnel. This required the questionnaire to be completed by each respondent individually. The program also necessitated that the respondents work on identical questionnaires at the same time. This procedure allowed the answering of questions pertaining to only one instrument at a particular time. This decreased the

likelihood of errors from misunderstanding and reduced the problem of respondent contamination. This instrument appears in Appendix 2 as Exhibit 1.

2. Managers General Questionnaire: The managers questionnaire was similar in concept to the instrument administered to the salesagents. It was designed to gather data regarding the manager's perceptions of themselves and their staff. As well, this questionnaire gathered information on the five factors used as sales performance indicators. The questionnaire was filled in by the managers while the salesagents were completing the Salesagents General Questionnaire and under the same conditions. There were several open-ended questions and space was provided for supplementary comments. This questionnaire was also administered before and after the training program. A copy of the Managers General Questionnaire appears in Appendix 2, under the heading Exhibit 2.

3. Salesagents Film Questionnaire: This instrument was designed to gather information from each salesagent for each of the ten training sessions. The questionnaire was basically concerned with determining the value of each training session to the sales personnel and also determining the cumulative value of the training sessions. In addition, the questionnaire was designed to determine if there were any changes in responses over the period

covered by the training sessions. This instrument appears in Appendix 2 as Exhibit 3.

4. Managers Film Questionnaire: This questionnaire was identical to the Salesagents Film Questionnaire. The questions were answered from the management perspective, rather than from the individuals perspective as in the case above. As in all other cases, the respondents filled in their respective questionnaires in a group and at the same time. This instrument appears in Appendix 2 as Exhibit 4.

Space was provided for comments in both the Salesagents Film Questionnaire and the Managers Film Questionnaire.

Because up to twenty-five respondents answered each questionnaire it was essential to have an efficient and effective set of questionnaires. The Salesagents General Questionnaire and the Managers General Questionnaire were each pilot tested on two faculty members from the University of Alberta. Each of the questionnaires were subsequently revised nine times. The Salesagents Film Questionnaire and the Managers Film Questionnaire were somewhat more straight-forward and were revised four times.

The questionnaires were designed using a seven point scale. This scale was chosen because it provided a wide range of answers for the questions, essentially

providing a continuum of responses. It also gave a mid-point so that the respondents could choose a neutral answer. Further, this scale allowed for an ordinal choice which is easily manageable for statistical purposes.[27] The scale allowed the user the privilege of "ranking" his responses independently of each other while at the same time providing data which were useful in the aggregate.

The use of scales in questionnaires requires that some trade-off occur in the data. Absolute accuracy must give way to point choices frequently encompassing a range of responses. However, the use of a scale speeds data analysis considerably. Open-ended questions and spaces for comments were provided on all the instruments for salesagents and managers who wished to clarify responses. This was done to reduce the possibility of bias which can occur in closed-end questionnaires.

The failure of a study can in many cases be attributed to inadequate questionnaire preparation. Questionnaires can be inadequately prepared for many reasons. Noteably, researchers have often not acquired a good working knowledge of the subject area and subsequently the questionnaires suffer from irrelevancy.[28] These problems have been dealt with through a study of real estate literature and extensive informal interviews with real estate salesagents and their managers.

The Sample

The selection of the sample in this research was constrained by several outside influences both operational and financial. As well, a further problem in the sample selection was evident upon review of previous research. It had been determined by Long[29] that real estate salespersonnel do not exhibit an easily identifiable set of "normal" characteristics. Accordingly, any selection of a sample based on the available demographic data for the total population of real estate salesagents would not necessarily have yielded more valid results than an opportunistic sample of one firm. Therefore, on the basis of the previous research, the operational and financial constraints, and the availability of a cooperating firm, an opportunistic sample was used in this study.

Regardless of the method of sample selection, so long as it is valid, Reichman[30] has stated that legitimate statistical techniques allow the researcher to genralize from a selection of a general group or population. The basis of this sample then is to make inferential statements about the general population of real estate salesagents by using the valid statistical techniques described later in this chapter.

The opportunistic sample was provided by a cooperating firm. Therefore, the maximum number of participants in the study was predetermined by the number of salesagents employed by the firm. Twenty-five

salesagents were available for the training program. Because of the weight, bulk and sensitivity of the audio-video equipment it was impractical to transport it to another field site while a training session was in progress at one location. This problem eliminated the possibility of a second concurrent training site. The pressure of time ruled out using a second site after the completion of the first training program. These training problems explain the relatively small sample used in connection with this study.

Only one manager was able to participate in the study. His responses were combined with those of the other respondents where this action was appropriate. In cases where such action was inappropriate, his responses were simply reported and compared with those of the other respondents. It should be noted that all the salesagents in the study's sample were employees of the same company and that participation was voluntary.

The voluntary participation in this research resulted in a significant drop-out problem. Of the original twenty-five respondents only thirteen participated in all of the training sessions and completed the questionnaires. The results of this research must be evaluated in the light of this limitation. Further research in this area has a major obstacle to overcome in maintaining an adequate number of respondents throughout a training program. The active nature of the

industry and the traditionally high turnover of personnel are problems the researcher must overcome if he is to achieve the respondent retention so necessary in conducting an experimental study of this design.

Data Collection and Recording

Data was collected through the use of the previously described questionnaires and through informal discussions and personal observation. All questionnaires were filled out in the presence of the researcher. Since questionnaires required written responses, misinterpretation of data during analysis was reduced. The guarantee of anonymity and the volunteer nature of the sample increased the likelihood of honest and complete answers. The presence of the researcher to collect the questionnaires upon completion provided additional assurances of confidentiality.

Once collected all questionnaires were coded on computer cards for evaluation. The format used in the coding of data is shown in Appendix 3, Exhibits 1, 2, 3 and 4. All evaluation was made from punched cards. Before the data were used for computer programs as input, the computer cards were keypunched and verified. A second verification was made separately from the first, and all data were checked by the researcher. This procedure was done to minimize the possibility of errors due to keypunching.

Data Processing and Evaluation

The use of the computer in social science research has simplified the researcher's task in the organization and analysis of data. In this research all the questionnaires were coded in accordance with the rules established in the book Statistical Package for the Social Sciences.[31] Various computer programs from this package were used in the analysis of the data. In addition, one other separate program NONØ5 was used for the analysis of paired samples (Wilcoxon Statistics).[32]

The Statistical Package for Social Science (S.P.S.S.) programs used in this study were "MARGINALS," "CROSSTABS" and "NONPAR CORR."[33] Some limited use was made of the program "PARTIAL CORR"[34] but much of the calculations were done by hand because only a few relationships developed which needed this form of statistical analysis. These program listings are noted in Appendix 4, Exhibits 1, 2, 3, 4 and 5.

Three methods of analysis were used primarily. "MARGINALS" provided a frequency distribution, mean, median and other statistics for each variable studied. "NONPAR CORR" provided Kendall's rank-order correlations (Tau) between all variables for both tests, and "NONØ5" provided Wilcoxon Statistics for the paired sample analysis.

The computer programs produced more than 3,700 correlation coefficients and over 1,600 separate

statistics. As well more than 1,100 cross tabulations and several hundred partial correlations were calculated. Obviously, many of the relationships and statistics which were generated were irrelevant because of the combination of variables involved. However, some interesting relationships became evident upon evaluation of the data and these are discussed in the body of this research.

The interpretation of findings generated in this study was greatly facilitated by the use of informal data gathered before and during the course of the training sessions. This data which was gained from comments and observations proved helpful in summarizing conclusions and presenting the material. A reveiw of literature supplied an interpretive framework for much of the data analysis. In particular, Non-parametric Statistics for Behavior Sciences by Siegal[35] and Statistical Package for the Social Sciences by Nie, Bent and Hull[36] were invaluable in setting up the statistical analysis. The thesis by R. J. Long,[37] as well as identifying a number of the key variables investigated in this study, provided much insight into the real estate industry. In addition a brief review of trade journals[38] and other a relevant literature provided a background for this study.

CHAPTER 3

SUMMARY OF RESULTS REGARDING LISTINGS

Chapters 3 and 4 follow the same general format. These two Chapters have been designed to provide a summary of the changes in responses for the thirteen sales-agents who completed both the beginning (test 1) and ending (test 2) tests. These Chapters are intended as descriptions of the changes in responses, and any statistical analysis has been included in later Chapters. Because of the original assumption that sales performance was measureable by the number of listings obtained and the number of sales made (Figure 1, p. 19), it was felt that the summary of results would be more meaningful if described separately from the statistical analysis.

Each proposition had several variables and each variable was represented by at least one question in the questionnaire. The variables and the propositions are discussed in the same order as they were introduced in Chapter 2.

In each of the propositions the list of variables used was not meant to be exhaustive. In the preparatory meetings with real estate managers and

salesagents, the variables chosen for this study were felt to be the most easily testable, the most authoritative and the most efficient for testing each proposition. Among other things, the discussions centred around a synthesis of Long's work,[39] in which he used similar variables to measure changes in his questionnaire responses.

Appendix I (p.146), contains a complete list of propositions, variables and the associated questionnaire location for the variables listed throughout this Chapter are aggregates of the responses to both tests and the corresponding questions on the questionnaire can be located by referring to Appendix I as noted above.

Proposition 1: Work Habbits Affect Listings

The work habits of salesagents were proposed to affect the number of listings an agent may generate. Described below is a summary of the findings with respect to salesagent's work habits and how they affected listing performance. The following work habit variables have been studied:

Hours of Work
Type of Work
Amount of Routine
Amount of Planning
Number of Calls
Listing Service Preference.

Hours of Work. The number of hours worked per week by each salesagent was lower than anticipated with a mean of 28.8 hours and a median of 30.0 hours. However, numerous times the respondents noted in their comments that a great deal of the working day was "unproductive" in the normal sense of work. Salesagents interviewed personally explained that selling real estate required irregular hours of work and that it was extremely difficult to estimate the number of hours worked per week.

The average number of hours worked did not change substantially between the two tests. However, it is worthy of note that the salesagents who did not complete the sales training program had 17.45 as the mean for hours of work per week. This is considerably lower than the salesagents who completed the program.

The results of the responses for the hours of work per week for salesagents are shown for both the beginning and ending questionnaires in Table 1.

Type of Work. The type of work done by real estate sales personnel was broken down into three categories: obtaining listings, selling and administrative support work. During the interviewing process, these three activities were described as the major time consuming functions in selling real estate. The variable was meant to measure the approximate proportions

TABLE 1

HOURS OF WORK PER WEEK

Hours	Number of Salesagents Test 1	Test 2
0 - 9	3	2
10 - 19	2	4
20 - 29	1	0
30 - 39	1	0
40 - 49	3	6
50 - 59	0	1
60 or more	2	0
Total Responses	13	13
Average Hours per Week	28.8	27.2

of time which were spent on each function. The sales function is described in Chapter 4. Tables 2 and 3 show the hours per week spent by salesagents in administrative work and the hours spent actually obtaining listings.

TABLE 2

HOURS OF WORK PER WEEK ON ADMINISTRATIVE WORK

Hours	Number of Salesagents Test 1	Test 2
0 - 4	7	5
5 - 9	4	2
10 - 14	1	3
15 - 19	0	1
20 or more	1	2
Total Responses	13	13
Average Hours per Week	4.5	8.7

The large change in the average number of hours spent on administrative work is a result of the responses of four new salesmen who on the first test coded zeros as the answer to the question and subsequently revised their answers for the second test.

TABLE 3

HOURS OF WORK PER WEEK OBTAINING LISTINGS

	Number of Salesagents	
Hours	Test 1	Test 2
0 - 4	6	5
5 - 9	2	2
10 - 14	0	4
15 - 19	1	0
20 or more	4	2
Total Responses	13	13
Average Hours per Week	11.8	9.2

Of the respondents who answered the questions on both qurstionnaires, there was little change in the average number of hours per week spent obtaining listings. However, there was a noticeable change in the distribution. More agents spent fewer hours obtaining listings in the second test. This may be the result of a more organized approach to the work week as a result of the training program. This will be discussed more fully later in Chapter 8.

Amount of Routine. This question was scaled from 1 to 7 and required the sales personnel to make

a choice concerning the amount of routine involved in their weekly work. It is perhaps significant to note that in both the first and second tests the results were grouped together in a continuous listing (i.e. no spaces between the responses). Further, in both tests the results showed a great frequency toward substantial routine in weekly work. The sales personnel did not appreciably change their attitudes concerning the amount of routine in their work over the course of the training program.

TABLE 4

AMOUNT OF ROUTINE IN WEEKLY WORK

Response	Number of Salesagents Test 1	Test 2
1 always	2	0
2	4	6
3 usually	4	3
4	3	3
5 uncertain	0	1
6 seldom	0	0
7 never	0	0
Total Responses	13	13

There was however a trend toward moderation in the responses. Test 2 show much more of a central tendency than did test 1.

The concept of work routine as examined in this question can best be described as the repetition of tasks associated with the work being done. Examples

of routine in the real estate industry might include making calls at the same time each day or setting aside a particular day each week to complete all administrative paper work.

Amount of Planning. The amount of planning done by a salesagent was felt to be an integral part of his work habits. The responses to the question showed that most real estate sales personnel do not plan more than several days ahead.

TABLE 5

AMOUNT OF PLANNING

Response	Number of Salesagents Test 1	Test 2
a few hours	2	0
a day at a time	4	6
several days	6	3
a week	1	3
two weeks	0	1
monthly	0	0
more than a month	0	0
Total Responses	13	13

The time units were the points most frequently given in response to preliminary questions regarding planning. Therefore, they were considered by salesagents and the researcher to be the most logical for reference points. Note the central tendency evident in test 2 of this variable. This is no doubt due to the emphasis placed on planning in the training sessions.

In the first test 30 per cent of the respondents planned their work a day at a time. The second test showed an even higher percentage (46 per cent). The significant feature of these responses is that a surprisingly high proportion of all real estate sales personnel do only minimal planning of their work.

Number of Calls. Vital to the success of any salesagent in real estate is the number of contacts made in a working day. Because of the nature of the business many salesagents have found the telephone to be a fast and effective method of establishing new contacts. The question was designed to establish what type of contacts salesagents preferred to make and the frequency with which they were used. A frequency distribution of response is contained in Table 6.

TABLE 6

NUMBER OF DAILY PERSONAL CONTACTS

Number of Contacts	Number of Salesagents	
	Test 1	Test 2
0 - 4	7	3
5 - 9	1	1
10 - 14	3	2
15 - 19	1	3
20 or more	1	4
Total Responses	13	13

The results of the question show that in the first test most of the salesagents made ten or fewer

personal contacts per day whereas in the second test most of the respondents made ten or more personal contacts per working day.

TABLE 7

NUMBER OF DAILY TELEPHONE CONTACTS

Number of Contacts	Number of Salesagents Test 1	Test 2
0 - 4	6	4
5 - 9	2	3
10 - 14	3	4
15 - 19	0	0
20 or more	2	2
Total Responses	13	13

The results from the table show no particular trend in the number of telephone contacts made by salesagents. Because of the number of new salesagents in the test sample these results might have been a "guess" by many agents as to the number of personal and telephone contacts they thought they might make once established. The comments on a number of questionnaires support this suggestion.

Listing Service Preference. In all cases and in both tests there was a marked tendency for the salesagents to prefer to list and market property through their own companies listing service.

The preference of one listing service over another was thought to be habitual. In preliminary

interviews, many salesagents felt that the use of a particular listing service was due to past experiences in the industry, and that individual company listing services would not be used to any great extent. In this case, the results showed that many agents used both listing services and after the training sessions there was a trend developed toward the company's own listing service. Since the emphasis in the training sessions was on the listing service of individual firms, the results show that this particular work habit was changed.

In test 1, over 38 per cent of the respondents preferred to list property with their own company. In the second test the percentage was much higher (53.7 per cent) and none of the respondents showed a preference for Multiple Listing Service (M.L.S.). In both cases a significant proportion of the test sample felt they used both listing services about equally.

TABLE 8

LISTING SERVICE PREFERENCE

Response	Number of Salesagents Test 1	Test 2
mostly M.L.S.	2	0
both about equally	6	6
most own company	5	7
Total Responses	13	13

Proposition 2: Client Relations Affect Listings

Client relations are presumed to be an important

part of any business. In the real estate industry client relations may directly affect the remuneration a salesagent may expect. The salesagent must have satisfactory interpersonal relationships with his clients or his earnings may be expected to fall. The relationship an agent develops with a client is dependent upon many variables. The following variables have been identified for study in this research:

Providing Extra Services
Availability to Client
Speed of Closing Listing Contracts
Telephone vs Personal Contact
Pricing Policy

Providing Extra Services. For many years some real estate salesagents have provided extra services to their clients as a means of maintaining a satisfactory relationship with them. The benefits to be derived from such a relationship included a customer loyalty for any recurring business and "word of mouth" advertising for the agent. The results of this research have shown that this trend remains quite strong. The extra services range from arranging for the hook-up of telephones and power to help with moving. More frequently however, salesagents provided small gifts "appropriate to the occasion" to their customers and these gifts were deemed to be an adequate provision of extra services.

TABLE 9

PROVISION OF EXTRA SERVICES OR GIFTS

Response	Number of Salesagents Test 1	Test 2
usually	10	9
occasionally	2	3
not usually	1	1
Total Responses	13	13

Availability to Client. The availability of each salesagent to clients should be a factor in client relations. Availability was measured in terms of the number of days per week a salesagent would be willing to see a client. The responses for this variable were closely grouped for both test 1 and test 2. Table 10 outlines the results of the responses on the questionnaires.

TABLE 10

AGENT AVAILABILITY TO CLIENT

Response	Number of Salesagents Test 1	Test 2
7 days a week 24 hrs.	6	4
7 days and evenings	4	5
weekdays and evenings	3*	4*
weekdays or evenings	0	0
Total Responses	13	13

* of this number 3 agents explicitly noted that they were available 6 weekdays and evenings.

Speed of Closing. When customers are confronted with salesagents who rush through a sales talk or a listing proposal they often resent it. This frequently causes an unfavourable impression which affects client relations. This variable was designed to see if the speed of closing a listing contract had any affect on the client relations. Table 11 shows the results of the question regarding the amount of time required to close a listing contract.

TABLE 11

SPEED OF CLOSING LISTING CONTRACTS

Time in Hours	Number of Salesagents Test 1	Test 2
0 - 1	8	6
1 - 2	1	4
2 - 3	3	2
more than 3	1	1
Total Responses	13	13
Average Time	2.8	3.0

The amount of time required to close a listing contract is overstated because of two responses. One response of one day and another of two days. Excluding these two extreme cases the average time required for the closing of a listing contract are 1.8 hours for test 1 and 2.0 hours for test 2.

Telephone vs. Personal Contacts. This question was designed to test the salesagents preference for using

the telephone as opposed to making personal contacts. Since much of the training sessions featured different techniques in communication it was of importance to see if this had any effect on the attitudes of the sales personnel over the course of the training period. The results of the question are summarized in Table 12.

TABLE 12

TELEPHONE VS. PERSONAL CONTACTS

Responses	Number of Salesagents Test 1	Test 2
prefer in person	3	7
both about equal	4	3
prefer telephone	6	2
Total Responses	13	13

The results indicate that after the training session more agents felt that it was to their benefit in affecting client relations to contact prospects in person rather than by telephone. This is verified in comments on the questionnaires reflecting this attitude. It can be stated that as a result of the training sessions, the real estate salesagents tested showed an increased preference for personal contacts.

Pricing Policy. The techniques used in setting a price on a property for inclusion in a listing contract were presumably important in customer relations. If listings were not priced realistically they would not

sell. Alternatively, if salesagents suggested a listing price which a client felt was too low, the client might take his business to another agent or firm. This question was designed to determine if sales personnel felt that listing properly at a realistic price was important. Implicit in this belief is that an agent will let the client suggest a price as an inducement to do business. The results of salesagents attitudes toward pricing are listed in Table 13. In both test 1 (87.5 per cent) and test 2 (92.3 per cent) of the salesagents tested felt that it was "extremely important" to have realistically priced listings (i.e. near the market value). In both cases the remaining agents considered pricing policy to be "important." There was therefore no change in the salesagents attitudes towards pricing policy in listing contracts.

TABLE 13

PRICING NEAR MARKET VALUE (LISTINGS)

Responses	Number of Salesagents Test 1	Test 2
extremely important	12	11
important	1	2
uncertain	0	0
Total Responses	13	13

Proposition 3: Personal Image Affects Listings

Personal image in the context of this research was defined as those characteristics, attitudes and

appearances which are descriptive of sales personnel. More specifically, salesagents were asked to describe their attitudes concerning their firm, their industry and their co-workers. These personal image variables were studied:

Attitude toward Company

Attitude toward Industry

Attitude toward Real Estate as an Occupation

Occupational Desirability

Appearance

Education

The evaluation of attitudes is a highly subjective endeavour. Nevertheless, in the aggregate, attitudes are often a very informative indicator.

Attitude toward Company. The intent of the question regarding this variable was to assess the attitude of real estate sales personnel toward their own company. The results of the question are tabulated below in Table 14.

TABLE 14

ATTITUDES TOWARD COMPANY

Responses	Number of Salesagents Test 1	Test 2
excellent company	9	8
better than average	3	4
average company	1	1
Total Responses	13	13

It was perhaps somewhat naive to have expected anything other than the responses received on this question. The reluctance to "bite the hand that feeds" is understandable. However, even though the responses were uniformly positive, this company still exhibited the high turnover characteristic of the real estate industry.[40]

Attitude toward Industry. The attitude toward the real estate industry was measured by the use of two questions on the questionnaire. In both cases the responses were positive. Table 15 contains a summary of responses regarding attitudes toward the industry.

TABLE 15

ATTITUDE TOWARD INDUSTRY

Respondents	Number of Salesagents Test 1	Test 2
excellent industry	8	3
better than average	5	8
average industry	0	1
below average	0	1
Total Response	13	13

The difference in the distribution is likely due to new sales personnel more clearly defining their attitudes toward the industry as a result of exposure during the training course. There is a noticeable trend away from the extreme of "excellent industry" in the first test to the more moderate "better than average"

in the second test.

The second question measuring attitude was concerned with salesagents perception of the competence of their co-workers. Although the responses are again positive, there is a much more moderate outcome as shown in Table 16.

TABLE 16

ATTITUDE TOWARD INDUSTRY
(opinion of other real estate salespeople)

Responses	Number of Salesagents Test 1	Test 2
all competent	1	0
most competent	10	11
no opinion	2	1
most incompetent	0	1
Total Responses	13	13
Mean	2.6	2.6

The table shows that the attitudes of real estate salesagents towards their co-workers did not change at all. These results are a direct contradiction of the feelings expressed by several salesagents in private conversations. In private, many agents expressed the opinion that the industry had too many "bad" salesagents and that this was causing ill will. Perhaps a restructured question on the questionnaire would have achieved a more congruent result.

Attitude toward Real Estate as an Occupation. This variable was also measured by two questions on the questionnaire. In both cases the variety of responses was reduced and became more positive at the second measurement. Table 17 shows the attitudes of salesagents towards real estate as an occupation, through a question dealing with whether or not the agent enjoys his work. Table 18 shows the evaluation by sales personnel of how they perceive other agents feel about their work.

TABLE 17

ATTITUDE TOWARD REAL ESTATE AS AN OCCUPATION
(for the individual)

Responses	Number of Salesagents Test 1	Test 2
enjoy work very much	10	12
enjoy work some	2	0
uncertain	1	1
Total Responses	13	13

TABLE 18

ATTITUDE TOWARD REAL ESTATE AS AN OCCUPATION
(for other salesagents)

Responses	Number of Salesagents Test 1	Test 2
like it very much	9	10
most like it	4	3
some like it	0	0
Total Responses	13	13

It is perhaps understandable that the responses were positive. Those who exhibited negative attitudes about real estate as an occupation were more likely to have not completed the sessions. Indeed, this proved to be the case.[41]

Occupational Desirability. This variable was intended to measure the extent to which salesagents felt that they would continue with real estate as a career. The responses to this question were overwhelmingly positive in both test 1 (83 per cent chose response 1) and test 2 (92 per cent chose response 1). The results are shown in Table 19. It was apparent that this attitude did not change as a result of the training sessions.

TABLE 19

OCCUPATIONAL DESIRABILITY

Responses	Number of Salesagents Test 1	Test 2
definitely career	12	11
possibly career	1	2
uncertain	0	0
Total Responses	13	13

Appearance. Salesagents were asked to assess whether or not appearance had any affect on performance. The responses were all positive on both tests (83 per cent chose response 1 on test 1 and 84 per cent chose response 1 on test 2). It can be assumed from these

responses that sales personnel feel strongly that a person's appearance affects his listing performance. The results are shown in Table 20.

TABLE 20

APPEARANCE AFFECTS PERFORMANCE

Responses	Number of Salesagents Test 1	Test 2
large extent	12	11
somewhat	1	2
uncertain	0	0
Total Responses	13	13

Education. The average level of education in the training group was complete high school. There was no noticeable difference in educational achievement between those who completed the course and those who did not. This variable was found to be related to others throughout the study and is noted in the appropriate sections. The level of education of the salesagents who started and completed the course is listed in Table 21.

TABLE 21

EDUCATION

Level Education	Number of Salesagents Completed the Course	Did Not Complete	Total
some high school	3	4	7
complete high school	7	5	12
some college	2	2	4
complete college	1	1	2
Total Responses	13	12	25

Proposition 4: Product Knowledge Affects Listings

The amount of knowledge a salesagent has about the specific products or services offered by his company was expected to have an affect on his ability to obtain listings. Product Knowledge in real estate is a function of many variables. Some of the more important are discussed here:

Legal Knowledge
Characteristics of Property
Characteristics of Neighborhood
Concentration of Sales
Training Level in Company
Training Level in Industry
Experience in Real Estate.

The sales personnel were asked to evaluate their proficiency with regard to the above variables. The aggregate view of these variables provides a general inference about the affect of product knowledge in obtaining listings.

Legal Knowledge. If salesagents were to be successful, an adequate knowledge of the law regarding real estate was felt to be important. There was no appreciable difference in the measurement of this variable between test 1 and test 2. This result was expected since there was no instruction on legal matters undertaken in the training course. Table 22 shows the responses.

TABLE 22

LEGAL KNOWLEDGE

Response	Number of Salesagents Test 1	Test 2
know everything	1	0
most aspects	6	6
some aspects	6	7
few aspects	0	0
Total Responses	13	13

Characteristics of Property. A knowledge of the property about to be listed was described as extremely important in preliminary interviews. The variable was designed to determine if agents felt that inspection of a property was important, and to what degree. As Table 23 shows, both in tests 1 and 2 the frequency of positive responses was very high.

TABLE 23

CHARACTERISTICS OF PROPERTY

Responses	Number of Salesagents Test 1	Test 2
always inspect	5	5
usually inspect	6	7
occasionally	1	1
seldom	1	0
Total Responses	13	13

Salesagents felt that inspection of a property was vital before a listing contract was obtained. This was confirmed by many comments on the questionnaires

outlining the importance of "seeing" the property.

Characteristics of Neighborhood. Similar to the variable above, this variable was designed to determine how important salesagents felt it was to have a good knowledge of the neighborhood in which a property is located. The characteristics of a neighborhood can be useful tools when discussing the value of property and its selling potential. In general salesagents agreed with this assessment. Table 24 summarizes the results of test 1 and test 2.

TABLE 24

CHARACTERISTICS OF NEIGHBORHOOD

Responses	Number of Salesagents Test 1	Test 2
always inspect	6	6
usually inspect	5	5
occasionally	1	1
seldom	1	1
Total Responses	13	13

In both cases there were salesagents who felt that the knowledge of the characteristics of a neighborhood were not helpful in obtaining listings. Comments on the questionnaires showed that these respondents felt the emphasis in listings should be on the property being discussed only and not on the characteristics of the neighborhood.

Concentration of Sales. The concentration of sales in one area or neighborhood would intuitively suggest a good general knowledge of the property available in that area. In test 1 there were a large number of responses suggesting that most sales were concentrated in one area. In test 2, however the curve had evened out considerably. Table 25 compares the questionnaire responses.

TABLE 25

CONCENTRATION OF SALES

Responses	Number of Salesagents Test 1	Test 2
all sales concentrated	0	1
most concentrated	8	6
some concentrated	4	4
few concentrated	1	2
Total Responses	13	13

The more even distribution in test 2 may be a result of new sales personnel refining their thoughts concerning sales concentrations. The relevance of this variable for listings is that sales in an area tend to create listings. Consumers tend to list a property with someone who has been successful in selling other property in that area.

Training Level in Company. This variable was designed to measure how the individual salesagent perceived the level of training in his own company.

In test 1, the responses were almost unanimously positive, however in test 2, the responses had moderated somewhat. At the beginning of the training it was perhaps naive to expect salesagents to express the thought that they were being inadequately trained. By the time the second test was given however, salesagents had been exposed to several different series of training films. The moderation in responses may be a reflection of a comparison which many of the agents were unable to make at the beginning of the training program. The results are shown in Table 26.

TABLE 26

TRAINING LEVEL IN COMPANY

Responses	Number of Salesagents Test 1	Test 2
extremely high	10	7
very high	3	5
typical	0	1
Total Responses	13	13

Training Level in Industry. The responses to the question measuring this variable were more uncommital than in the question regarding the company. In test 1, 30 per cent of the respondents felt the level of training was "typical of all industries." In test 2, 40 per cent felt that the level of training was very low. Table 27 summarizes the results. Note that two respondents did not answer the question in test 1. These were new salesagents.

TABLE 27

TRAINING LEVEL IN INDUSTRY

Responses	Number of Salesagents Test 1	Test 2
extremely high	0	0
very high	3	4
typical	4	3
very low	4	6
extremely low	0	0
Total Responses	11	13

The overall tendency in both tests was central but in test 2 the results showed a trend towards more dissatisfaction with the level of training in the industry.

As a second part of this variable, a further question was designed to determine if salesagents felt that more or less training was required by real estate personnel. This question had no evaluative component and was strictly an opinion on the part of the sales person. In addition, positive responses to this question inferred a dissatisfaction with present training levels. The results are tabulated in Table 28.

The results of this question infer that salesagents were dissatisfied with the level of sales training being provided by their company. However, from the results of the film questionnaire it was evident that most salesagents felt that any additional training would be beneficial. Therefore, agents were

perhaps expressing a desire for much more training rather than a disapproval of the present level of training. As with the level of training in the company no statistical relationships were found relating this variable to the parameters.

TABLE 28

AMOUNT OF SALES TRAINING REQUIRED

Responses	Number of Salesagents Test 1	Test 2
great deal more needed	2	2
need more than at present	8	7
present amount adequate	3	4
Total Responses	13	13

Experience in the Field. Experience is probably one of the most important determinants of product knowledge. The more familiar a salesagent becomes with his products, the more generally knowledgeable he will be about them. Table 29 denotes the experience of the sales personnel participating in this research. Table 30 relates experience to the present employer, and Table 31 breaks down experience to the present sales branch or office. In each case the thirteen salesagents who completed the course are listed in parentheses under test 1. This data shows that it is the salesagent with 0 to 12 months experience that has not completed the training sessions. The non-completion factors are shown in Table 31.

TABLE 29

EXPERIENCE IN INDUSTRY

Responses	Number of Salesagents Test 1	Test 2
1 - 3 mos.	10 (7)	6
3 - 6 mos.	2 (0)	1
6 - 12 mos.	3 (0)	0
1 - 2 yrs.	6 (4)	4
2 - 5 yrs.	3 (2)	2
Total Responses	24 (13)	13

TABLE 30

EXPERIENCE IN FIRM

Responses	Number of Salesagents Test 1	Test 2
1 - 3 mos.	11 (7)	7
3 - 6 mos.	1 (0)	0
6 - 12 mos.	3 (0)	0
1 - 2 yrs.	6 (4)	4
2 - 5 yrs.	3 (2)	2
Total Responses	24 (13)	13

TABLE 31

EXPERIENCE IN BRANCH

Responses	Number of Salesagents Test 1	Test 2
1 - 3 mos.	12 (7)	7
3 - 6 mos.	2 (0)	0
6 - 12 mos.	1 (0)	0
1 - 2 yrs.	6 (4)	4
2 - 5 yrs.	3 (2)	2
Total Responses	24 (13)	13

Experience in the industry is classified as one of the parameters of this study and is therefore discussed as it occurs in conjunction with other variables.

TABLE 32

NON-COMPLETION OF COURSE

Experience	Started	Number of Salesagents Finished	Not Finished	Per Cent
1 - 3 mos.	10	6	4	40
3 - 6 mos.	2	1	1	50
6 - 12 mos.	3	0	3	100
1 - 2 yrs.	6	4	2	33
2 - 5 yrs.	3	2	1	33
Total	24	13	11	45

Proposition 5: Advertising Techniques Affect Listings

The type of advertising and its frequency was proposed to affect the number of listings salesagents might obtain. The variables used to test this proportion were those most easily measurable and most frequently used by salesagents in the real estate industry. The variables discussed under this proposition represent the residual of more than twelve discussed initially with salesagents and managers in informal conversations. They are:

Referrals

By Owner Ads

Signs

Open House

Cold Calls

Mailers

Radio/T.V.

The participating salesagents were asked to evaluate the usefulness of the above variables in obtaining listings. The results are tabulated below.

Referrals. The effectiveness of referrals from established clients or mutual acquaintances shows that agents considered this variable extremely important.

TABLE 33

USEFULNESS OF REFERRALS TO LISTINGS

Responses	Number of Salesagents Test 1	Test 2
extremely useful	11	12
some use	1	1
undecided	0	0
little use	1	0
Total Responses	13	13

By Owners Ads. Table 34 summarizes the responses for this variable. By owner ads did not appear to be as useful as some of the other variables.

TABLE 34

USEFULNESS BY OWNER ADS TO LISTINGS

Responses	Number of Salesagents Test 1	Test 2
extremely useful	1	2
some use	7	7
undecided	1	2
little use	4	2
Total Responses	13	13

Signs. Signs are the traditional method of showing that property is for sale. Salesagents were asked to evaluate whether these signs were also useful in helping them to obtain further listings.

TABLE 35

USEFULNESS OF SIGNS TO LISTINGS

Responses	Number of Salesagents Test 1	Test 2
extremely useful	5	8
some use	6	4
undecided	1	0
little use	1	1
Total Responses	13	13

It is evident from the data that the respondents felt that signs also helped to generate new listings.

Open House. Although it was originally supposed that open houses would be useful only for selling purposes, it became clear from the data in Table 36 and the comments on the questionnaires that this was not the case. Some salesagents suggested that the exchange of information at open houses often generated new ideas that led to more listings. The data confirm this attitude.

TABLE 36

USEFULNESS OF OPEN HOUSES TO LISTINGS

Responses	Number of Salesagents Test 1	Test 2
extremely useful	5	8
some use	7	5
undecided	1	0
little use	0	0
Total Responses	13	13

Cold Calls. Although a number of salesagents expressed that cold calls were "hard to do" both verbally and in their comments, they were almost unanimous in describing it as "very useful" in obtaining listings. Table 37 summarizes the attitudes concerning cold calls. There were some noteable exceptions however and these show up in the tabulation.

TABLE 37

USEFULNESS OF COLD CALLS TO LISTINGS

Responses	Number of Salesagents Test 1	Test 2
extremely useful	4	7
some use	6	4
undecided	0	0
little use	1	0
of no value	2	2
Total Responses	13	13

Mailers. Direct mailing to prospective clients is an old method of making new contacts. The effectiveness of this method of advertising to obtain listings

is tabulated in Table 38. It seems apparent that mailers were not considered important as a means of obtaining listings.

TABLE 38

USEFULNESS OF MAILERS TO LISTINGS

Responses	Number of Salesagents Test 1	Test 2
extremely useful	1	1
some use	5	9
undecided	2	1
little use	3	1
of no value	2	1
Total Responses	13	13

Radio/T.V. Radio and T.V. advertising was not considered important by the respondents in test 1 or test 2. Only a slight change had developed in the responses. Table 39 illustrates the changes.

TABLE 39

USEFULNESS OF RADIO/T.V. TO LISTINGS

Responses	Number of Salesagents Test 1	Test 2
extremely useful	2	3
some use	2	2
undecided	2	1
little use	4	5
of no value	3	2
Total Responses	13	13

Overall, Radio and T.V. advertising is not considered a valuable aid to obtaining listings by

most salesagents.

The inclusion of advertising techniques in a study of this nature was to discover if some techniques were viewed by salesagents as more useful than others. As can be seen from the results, in all cases except for radio and T.V. advertising, the responses were more positive in test 2 than in test 1. It is anticipated that the changes in the responses are due to the training sessions.

CHAPTER 4

SUMMARY OF RESULTS REGARDING SALES

Due to the nature of the research undertaken, one evaluation of many of the variables studied can be used to make inferences about their affect on obtaining listings and sales. Therefore, in the interests of expediency and readability many of the tabulations were not repeated in this chapter. Rather a reference was given to the appropriate table and page number in Chapter 3 when data were needed for a presentation, or to make a point. The only tables produced in this chapter were those that pertained specifically to sales.

Proposition 1: Work Habits Affect Sales

The work habits of the individual salesagents was believed to affect sales performance. As with Listings, the following variables have been determined to be of value to this study and will be discussed:

Hours of Work

Type of Work

Amount of Routine

Amount of Planning

Number of Calls

Listing Service Preference

Again, each variable was tested by the use of at least one question on the Salesagents General Questionnaire.

Hours of Work. (Table 1, p. 37). As shown in this table, there was no appreciable difference between the average number of hours worked per week in test 1 and test 2. Many salesagents expressed the view in their comments on the questionnaires that hours of work were very difficult to estimate due to the nature of the occupation. Much unproductive time was spent driving to and from appointments and in "prospecting" for new clients.

Type of Work. The type of work activity done by salesagents was measured in percentages. This allowed for a continuum from 0 to 100 per cent for each activity. As can be seen in Tables 2 and 3 (pp. 37-38) there was a high concentration of salesagents who responded with low number of hours to the functions of administrative work and obtaining listings. The third type of work activity was selling. Table 40 summarizes the results of this question.

Amount of Routine. Work routine was anticipated to affect sales performance. A summary of the amount of routine in weekly work is shown in Table 4 (p. 39). Although there was a strong tendency toward

TABLE 40

HOURS OF WORK PER WEEK ON SELLING ACTIVITIES

Hours	Number of Sales Agents Test 1	Test 2
0 - 9	8	6
10 - 19	0	4
20 - 29	4	2
30 or more	1	1
Total Responses	13	13

routine in selling, many agents suggested the selling activity in itself was not routine. They felt that "routine" in the real estate industry must have a broad definitional scope in order to be meaningful.

Amount of Planning. The work habits of an individual include the amount of planning that the person does. The tabulation of the questionnaire results show that a large proportion of the respondents in both test 1 and test 2 prefer to plan only a few days or less ahead (Table 5, p. 40). Planning work functions was important to obtaining listings as well as to selling. It was assumed that those persons who planned their work in advance would be more effective and therefore more successful in sales. However, as will be discussed later, there was no apparent relationship between income and the amount of planning done by salesagents. Conversations did reveal however, that a great deal of "informal" planning was done by many agents. In this

way they informally planned up to a week in advance.

Number of Calls. The number of calls made and the type of calls made should have had a significant impact on sales. Personal contact is the basis of sales. As shown in Table 6 (p. 41) most salesagents made ten or fewer personal contacts per day in test 1, and by test 2 most agents made more than ten personal contacts per day. There was a great deal of emphasis placed on the personal contact as an important aspect of selling in the films. It is anticipated that the change in responses was due to this emphasis in the training program.

The use of telephone contacts (Table 7, p. 42) was shown to exhibit no particular trend during this research. Informal conversations with salesagents did reveal that making contacts by telephone was viewed as much more useful in obtaining listing contracts than in selling or making sales contacts. This was consistent with the data collected in open-ended questions on the Salesagents General Questionnaire and the Salesagents Film Questionnaire.

Listing Service Preference. Because of the structures of listing service payout techniques, it was anticipated that sales would be affected by the listing service used. While it was shown in Table 8 (p. 43) that most salesagents in this study preferred to use

their own company's listing service, it was interesting to note that it was married salesagents who preferred to use M.L.S.

Proposition 2: Client Relations Affect Sales

As in Chapter 3, Client Relations was felt to directly affect the remuneration of the salesagents. Since sales are one component of the remuneration an agent receives, client relations should therefore be expected to affect remuneration by influencing the number of sales made. Several variables were discussed regarding client relations:

Providing Extra Services
Availability to Client
Speed of Closing Sales
Telephone vs. Personal Contacts
Pricing Policy

Providing Extra Services: Table 9 (p. 45) in Chapter 3 outlined a frequency distribution of the agents who provided extra services or gifts to buyers. Table 9 indicates that most agents did provide extra services. However, there were two interesting developments which became evident from statistical analysis. First, all younger salesagents answered the question positively. Second, females preferred not to provide extra services to their clients. This will be described more fully in Chapter 5, where the linear relationships between

variables is discussed.

Availability to Client. An agents availability to clients was expected to affect sales. In Table 10 (p. 45) it was noted that most salesagents were available to clients at least five days and evenings per week. Open-ended questions and conversations disclosed that salesagents felt it was extremely important to be available at all times for clients wanting to purchase a property but less important for those selling property and for those listing property.

Speed of Closing. The amount of time required to close a sale was deemed to have an affect on client relations. As shown in Table 41 below most salesagents required less than two hours to close a sale.

TABLE 41

SPEED OF CLOSING A SALE

Time in Hours	Number of Salesagents Test 1	Test 2
0 - 1	6	4
1 - 2	4	2
2 - 3	2	0
more than 3	1	2
Total Responses	13	8
Average Time	1.9	2.0

In conversations, it was revealed that salesagents talked to an average of six customers before they were able to close a sale. It was noted by several

salesagents on the questionnaires that the closing of a sale was not an easily identifiable process. Some agents viewed the closing of a sale as a separate part of a sales presentation, while others felt that the closing of a sale was a part of the whole sales process and as such was difficult to define in terms of hours and minutes.

Telephone vs. Personal Contacts. When contacting prospects, it was felt that agents would generally have a preference for one mode of communication over the other. The frequency distribution in Table 12 (p. 47) shows that the use of the training films increased the use of personal contacts over telephone contacts. Two other relationships became evident as a result of further analysis. It was found that younger salesagents preferred to use the telephone more than did older salesagents. The other relationship which became evident was between marital status and the communication device. Married salesagents were more likely to use personal contacts than unmarried salesagents.

Pricing Policy. It was anticipated that the method by which a salesagent priced a property for listing would affect the number of sales made. The importance of obtaining realistic offers for homes was almost universal among all sales personnel. Table 42 shows the results of this question. Note the added

emphasis on positive responses as a result of the training course. The importance of realistically pricing property and obtaining realistic offers had no relationship with any other variable. It was uniquely positive and independent.

TABLE 42

PRICING NEAR MARKET VALUE (SALES)

Responses	Number of Salesagents Test 1	Test 2
extremely important	4	8
important	9	5
uncertain	0	0
Total responses	13	13

Proposition 3: Personal Image Affects Sales

Personal Image should affect sales ability in much the same manner as it would affect listing performance. The attitudes of agents towards the variables in this proposition have been presented in Chapter 3. The variables are:

Attitude toward Company

Attitude toward Industry

Attitude toward Real Estate as an Occupation

Occupational Desirability

Appearance

Education.

Attitude toward Company. Table 14 (p. 49) in Chapter 3 provided a distribution of the attitudes of the salesagents toward their own company. The salesagents attitudes toward their company were also anticipated to be a variable which would affect sales performance as well as listing performance. The positive results were almost universal. Salesagents revealed in written comments that a positive attitude was essential in a sales oriented industry.

Attitude toward Industry. Tables 15 (p. 50) and 16 (p. 51) provided a distribution of opinion regarding the attitudes of salesagents toward the industry. Further analysis revealed relationships linking age and marital status to attitudes toward the industry. It was found that young salesagents made up the group who thought that some agents were incompetent. Older agents were more moderate in their responses. As well, married salesagents were generally less critical of other agents in the industry than were the young salesagents.

Attitude toward Real Estate as an Occupation. In Chapter 3, Tables 17 and 18 (p. 52) documented the responses of the salesagents attitudes toward real estate as an occupation. There were two questions pertaining to this variable on the Salesagents General

Questionnaire. The positive results to the questions should perhaps have been anticipated to strengthen over the length of the course since intuitively those salesagents who liked their occupation would be more likely to continue with the training. Indeed, as was mentioned in Chapter 3, those salesagents who did not complete the course showed more negative responses to this question.

Occupational Desirability. The measurement of the extent to which a salesagent would like to remain in real estate as a career was the object of this variable. As in the above case the responses were all positive to the question on the questionnaire. No one group was shown to be more likely to remain in real estate as a career, but the statistical analysis showed that women were more likely to leave the industry than men. The results were shown in Table 19 (p. 53).

Appearance. The assessment of the effect of appearance on sales was positive. Table 20 (p. 54) shows that in both test 1 and test 2 response 1 was chosen in over 83 per cent of the cases. It is evident that salesagents regard appearance as an important factor in sales success.

Education. Education was discussed in Chapter 3 (Table 21, p. 54). It was discussed in relation to other variables as they occurred throughout the study.

Proposition 4: Product Knowledge Affects Sales

A salesagents knowledge about the product he sells should affect his performance. The more knowledgeable the sales personnel, the more effective and therefore the more successful they should be. The variables discussed were the same as those discussed for Listing performance:

Legal Knowledge
Characteristics of Property
Characteristics of Neighborhood
Concentration of Sales
Training Level in Company
Training Level in Industry
Experience in Real Estate.

Legal Knowledge. The frequency distribution of responses to this question appear in Table 22 (p. 56). The responses showed that most agents were fairly confident of their ability concerning legal matters. It was the inexperienced sales personnel who responded with the scores indicating they felt least confident about legal knowledge. That is, the more experienced the salesagent the more confident he was concerning this variable.

Characteristics of Property. Table 23 (p. 56) outlined the distribution of responses to the question of inspecting property before attempting to sell it. By

far the majority of salesagents preferred to inspect property before attempting a sale. In both the results concerning sales and those concerning listings inspecting property was shown to be important.

Characteristics of Neighborhood. As with property characteristics, positive responses were found regarding this variable. Table 24 (p. 57) shows the distribution of answers to this question. Married salesagents placed more importance on inspecting the neighborhood in which homes are listed than did single salesagents.

Concentration of Sales. The concentration of sales in one geographic area or neighborhood was expected to provide a sales advantage to an agent. In Table 25 (p. 58) the responses categorized show that most agents did concentrate their sales. The trend is not universal however, and a few very strong negative responses were recorded.

Training Level in Company. As in Chapter 3 the responses to this question were overwhelmingly positive. It was perhaps because many agents had no reference point for comparison of training programs. The responses are shown in Table 26 (p. 59).

Training Level in Industry. A central tendency was evident in responses to this question. There was a

small majority of respondents who felt that the level of training in the industry was inadequate. Table 27 (p. 60) and Table 28 (p. 61) show the results of the two questions which were designed to measure this variable.

Experience in the Field. Experience in the field was documented in Chapter 3 in Tables 29, 30 and 31 (p. 62). Since experience was one of the parameters of the statistical analysis it will be discussed in conjunction with the other variables as it occurs. By far the majority of the salesagents involved in this study have been in real estate industry for less than a year.

Proposition 5: Advertising Techniques Affect Sales

The effect of seven advertising techniques on sales performance was measured by a tabular question on the Salesagents General Questionnaire. The techniques are listed:

Referrals
By Owner Ads
Signs
Open House
Cold Calls
Mailers
Radio/T.V.

Evaluation of the effectiveness of these techniques was made separately for sales and listings. The

results for sales effectiveness are tabulated below.

Referrals. Agents considered referrals as vital in promoting sales. The responses are similar to those tabulated for the usefulness of referrals in promoting listings found in Table 33 (p. 64). Table 43 shows the distribution for sales.

TABLE 43

USEFULNESS OF REFERRALS TO SALES

Responses	Number of Salesagents Test 1	Test 2
extremely useful	10	11
some use	0	2
undecided	2	0
little use	1	0
of no value	0	0
Total Responses	13	13

By Owner Ads. Table 38 (p. 67) summarizes the responses for the effectiveness of looking for, and following up on "by owner" ads in selling. Note that the distribution is much more difuse than for the previous variable. Although there is a convergence of responses in test 2, the opinions are quite evenly divided on the usefulness of this technique to selling.

Signs. The usefulness of sings in real estate sales received the most positive responses of any of these seven advertising techniques. Table 45 shows the results of the questionnaire.

TABLE 44

USEFULNESS OF BY OWNER ADS TO SALES

Responses	Number of Salesagents Test 1	Test 2
extremely useful	1	0
some use	4	6
undecided	2	2
little use	4	5
of no value	2	0
Total Responses	13	13

TABLE 45

USEFULNESS OF SIGNS TO SALES

Responses	Number of Salesagents Test 1	Test 2
extremely useful	10	9
some use	2	3
undecided	1	1
little use	0	0
of no value	0	0
Total Responses	13	13

Open House. Agents responses to this technique are shown in Table 46. While most agents felt open houses were valuable, it was not ranked as nearly as useful as signs.

Cold Calls. Cold Calls were stressed during the training sessions as a very effective advertising technique. Table 47 illustrates that as a result of the training sessions the responses became more positive.

TABLE 46

USEFULNESS OF OPEN HOUSES TO SALES

Responses	Number of Salesagents Test 1	Test 2
extremely useful	7	8
some use	5	4
undecided	1	1
little use	0	0
Total Responses	13	13

TABLE 47

USEFULNESS OF COLD CALLS TO SALES

Responses	Number of Salesagents Test 1	Test 2
extremely useful	2	6
some use	5	3
undecided	3	0
little use	2	2
of no value	1	2
Total Responses	13	13
Median Response	3.2	2.76

The median response was reduced from 3.2 in test 1 to 2.7 in test 2. Neither age nor experience exhibited any direct relationship with the use of cold calls in selling.

Mailers. Table 48 shows that sales personnel regarded the use of mailers in advertising as fairly unimportant in test 1. By test 2 however, about half of the salesagents were receptive to the idea of mailers.

The change can be attributed to the emphasis on innovative advertising methods in the training sessions and subtle references to mail advertising.

TABLE 48

USEFULNESS OF MAILERS TO SALES

Responses	Number of Salesagents Test 1	Test 2
extremely useful	0	1
some use	3	6
undecided	5	1
little use	4	4
of no value	0	1
Total Responses	13	13

Radio/T.V. Advertising in radio and television has not traditionally been an effective tool in real estate sales. This statement was verified by the results of the question as tabulated below.

TABLE 49

USEFULNESS OF RADIO/T.V. TO SALES

Responses	Number of Salesagents Test 1	Test 2
extremely useful	1	0
some use	4	6
undecided	1	1
little use	5	4
of no value	2	2
Total Responses	13	13

No substantial trends were evident regarding the usefulness of radio and television advertising. It appears that agents are fairly uncommitted in terms of its effectiveness in selling.

CHAPTER 5

SUMMARY OF KENDALL RANK-ORDER CORRELATION COEFFICIENTS

This Chapter will discuss the relationships which exist between the variables discussed in the previous Chapter. Each proposition will be analysed as a separate unit to determine if the variables used to measure it are internally consistent. The analysis is intended to show that the variables used in each proposition are indeed a measure of that proposition.

Kendall rank-order correlation coefficients (Tau) were used to measure the interrelationships between variables in each proposition. In addition, all variables were tested for relationships with six basic parameters in this study: age, sex, marital status, income, education and experience. Because of the number of calculations involved in this analysis, only those relationships which exhibited a coefficient of T≥0.2500 have been reported as interesting.[42] These interesting relationships will be discussed in order of the variables as listed in each proposition, beginning with proposition 1. Wherever possible, the data has been been placed in tabular form and for a more readable presentation all signs have been removed from the correlation coefficients.

Proposition 1: Work Habits Affect Listings/Sales

There were six variables used in determining the effects of the training program on Work Habits. The Tau correlation coefficient provides an indication of the strength of the relationship between the variables investigated. An analysis of the coefficients will aid in determining if the variables listed under Proposition 1 should be categorized as Work Habits. The results of the Kendall rank-order correlation coefficients for Proposition 1 are shown in Table 50

The table shows that eleven of the fifteen combinations of variables related at a level of $T \geq 0.2500$. The variable type of work showed that no relationship existed between it and the amount of routine and the amount of planning done by an individual salesagent. This result indicates that the type of work (administrative, selling, or obtaining listings) should perhaps be included under a separate proposition heading. As well, the amount of routine used by salesagents does not relate to the amount of planning or the number of calls made. There may be several explanations for this result. The amount of routine may be looked upon as a substitute for planning by many salesagents. That is, a highly structured routine may preclude the use of planning and hence the number of calls that will be made. Although these relationships do not exist statistically they were a "salesagents view" of those factors which describe Work Habits and were

TABLE 50

KENDALL COEFFICIENTS FOR PROPOSITION 1

	Hours of Work	Type of Work	Amount of Routine	Amount of Planning	Number of Calls	Listing Service Preference
hours of work		0.2671*	0.2693*	0.4001*	0.4756*	0.5790*
type of work			0.1441	0.0395	0.4554*	0.3010*
amount of routine				0.0198	0.1049	0.5932*
amount of planning					0.2639*	0.2720*
number of calls						0.2867*
listing service preference						

*indicates a relationship of T≥0.2500.

Source: Proposition 1, variables 1 through 6, see Appendix 2 for corresponding question numbers on questionnaire.

therefore grouped into Proposition 1.

Several interrelationships of variables were evident concerning Work Habits after the Kendall rank-order analysis of all variables was completed. The amount of routine normally used by salesagents was found to be positively related to the inspection of property. This means that those agents who used a routine regularly were more likely to inspect a property before showing it. This relationship was very strong (T = 0.4045).[43] Another relationship was found between the planning work in advance and the number of contacts made by telephone each day. It was evident that those agents who constructed a plan for work in advance included a specific number of telephone contacts in the work pattern (T = 0.2832).[44] This data confirms the relationship found in Table 50.

An interesting relationship was evident between age of respondent and the use of the telephone. Respondents less than 30 years of age preferred to use the telephone (T = 0.3578)[45] whereas older respondents preferred personal contact. This was confirmed by the results shown in Chapter 3.

Proposition 2: Client Relations Affect Listings/Sales

There were five variables used in assessing Client Relations in this study. Of these variables two had two questions each on the Salesagents General Questionnaire. These were speed of closing and pricing

policy. Each of these variables had to be interpreted separately for listings and sales and therefore the two questions resulted. The strength of association between these variables is shown in Table 51.

In this proposition, twelve of the twenty-one combinations related well to each other. For two relationships there was insufficient data to calculate a Tau value and for seven of the variables the relationships were less than T≥0.2500. The availability of a salesagent to clients has shown no relationships with five of the seven variables in the table. It became evident that the availability of a salesagent to his clients was not a variable descriptive of Client Relations. This variable was deemed to be important by salesagents in numerous comments and informal conversations and upon further analysis it became clear that this variable should not have shown a relationship with many of the others. For example, the availability of a salesagent to his clients is an event exclusive of the pricing policy used by the salesagent in making sales or obtaining listings. The statistical analysis supports this description. It must be assumed therefore that this variable more correctly belongs in another proposition or that the questionnaire was structured in such a way as to destroy any relationships which might have existed.

The statistical analysis shows that even though the trend to provision of extra services remains strong,

TABLE 51

KENDALL COEFFICIENTS FOR PROPOSITION 2

	Provide Extra Services	Avail-ability to client	Speed of Closing Sales	Speed of Closing Listings	Telephone vs Personal Calls	Pricing Policy Sales	Pricing Policy Listings
						Near Market Value	
provide extra services		0.1369	0.6471*	0.5001*	0.4123*	0.2526*	0.0905
availability to client			0.0401	0.0502	0.4411*	0.1157	0.0756
speed of closing--sales				0.7014*	0.3258*	n.a.	0.2988*
speed of closing-listings					0.1536	0.4512*	0.3684*
telephone vs. personal calls						n.a.	0.3992*
pricing policy--sales							0.4398*
pricing policy--listings							

* indicates a relationship of T≥0.2500.

n.a. indicates insufficient data to calculate T.

Source: Proposition 2, variables 1 through 5, see Appendix 2 for corresponding question numbers on questionnaire.

there were definite segments of the sales force population which use the technique. For example, an examination of the six parameters of this study showed a relationship between experience and this variable (T = 0.3528).[46] The relationship states that the salesagents with the least experience (less than 1 year) are more likely to provide extra services than are more experienced agents. A relationship was also found between more experienced agents and availability to clients (T = 0.2892).[47] There was however, no relationship found between age, experience and total sales.

Younger salesagents showed a marked preference for the use of the telephone (T = 0.4848)[48] and a cross-tabulation indicated that it was young single salesagents who most used the telephone for contacting clients. A further relationship showed that the more experienced the agents were, the more they felt that listing realistically was important (T = 0.3660).[49] There was also a moderately strong relationship shown between age and list pricing policy. Those agents over 30 years old showed listing "realistically" as more important than did younger agents (T = 0.3307).[50]

Of the variables in Proposition 2 only one relationship became evident as a result of the calculation of the Kendall rank-order correlation coefficients for all variables. A positive relationship was found

between the amount of training received and the time required to close a real estate sale. This is a relationship which might have been expected regardless of an explicit statement of the correlation, but evidence has added much more validity (T = 0.3077).[51]

Proposition 3: Personal Image Affects Listings/Sales

The proposition regarding personal image was the most difficult to construct. It was designed after consultation with many salesagents concerning what they felt made up their personal image. Surprisingly, it is also the proposition which exhibited the most internal congruence. As shown in Table 52, only one relationship fell below the level of T≥0.2500.

The table shows that no relationship was found between the salesagent's attitude toward the industry and his education. This can be viewed as an important finding. In conversations with real estate managers, the view was expressed that the level of education of the salesforce was a good indicator of selling potential. There was no evidence found to support a statement of this nature in the analysis. In the calculations of Kendalls Tau for all variables there were only a few relationships linking personal image variables to any others. It was found that younger salesagents (less than 30) tended to be more critical of their co-workers (T = -0.4111).[52] This was perhaps due to the frustration

TABLE 52

KENDALL COEFFICIENTS FOR PROPOSITION 3

	Attitude to Firm	Attitude to Industry	Attitude to R.E. as Occupation	Occupational Desireability	Appearance	Education
attitude to firm		0.2502*	0.6778*	0.5270*	0.3002*	0.4514*
attitude to industry			0.4531*	0.3046*	0.2057	0.1035
attitude to R.E. as occupation				0.5613*	0.3841*	0.3885*
occupational desireability					0.4359*	0.3569*
appearance						0.3216*
education						

*indicates a relationship of T≥0.2500.

Source: Proposition 3, variables 1 through 6, see Appendix 2 for corresponding question numbers on questionnaires.

experienced by new salesagents in achieving a satisfactory level of sales. There was a relationship between a high level of education and a strong desire to remain in the real estate industry (T = 0.3569).[53] Education has been treated as an independent parameter throughout this study. It was therefore discussed in relation to other variables as they occurred throughout the study.

Proposition 4: Product Knowledge Affects Listings/Sales

Most relationships which became evident in this section occurred within the proposition. Not surprisingly, the variable which showed the highest probability of being related with any other variable was the training level in the industry. In Chapter 3 and 4 the reluctance of agents to criticise the training level in their own firms was discussed. Here, it was found that training was related to a number of variables. These relationships can be extrapolated to include training level in the firm. Although as mentioned no firm statistical data are available to prove this statement, a relationship was evident between the level of training in the firm and the industry.

Table 53 summarizes the results of the relationships within the proposition.

There were six relationships which were not evident out of the twenty-one combinations of variables.

TABLE 53

KENDALL COEFFICIENTS FOR PROPOSITION 4

	Legal Knowledge	Characteristics of Property	Characteristics of Neighborhood	Concentration of Sales	Training Level in Firm	Training Level in Industry	Experience
legal knowledge		n.a.	0.1167	0.4379*	0.2842*	0.0336	0.5393*
characteristics of property			0.2814*	0.2605*	0.3001*	0.2863*	0.3855*
characteristics of neighborhood				0.3735*	0.7123*	0.8265*	0.2595*
concentration of sales					0.0966	0.1318	0.1916
training level in firm						0.5472*	0.4779*
training level in industry							0.3291*
experience							

*indicates a relationship of T 0.2500.

n.a. indicates insufficient data to calculate T.

Source: Proposition 4, variables 1 through 7, see Appendix 2 for corresponding question numbers on questionnaire.

One was the result of insufficient data (legal knowledge and characteristics of neighborhood). In this case the insufficient data was a result of a number of salesagents not answering the question on legal knowledge. The level of training in the industry showed no relationship with the amount of legal knowledge a salesagent felt he had. This perhaps provides an indication of the lack of effectiveness of the provincial licensing examinations and training program.

Concentration of sales in one geographic area appeared to have no relationships with training levels and experience but it did relate highly with legal knowledge and with property and neighborhood characteristics. These results were intuitively acceptable. There should be relationships between characteristics of the property and neighborhood and the concentration of sales. However, the level of training in the firm and industry would not necessarily be expected to relate to concentration of sales. Perhaps this variable (concentration of sales) was not required in this analysis or should have been part of another proposition. In conversation with managers and salesagents concentration of sales was shown to be a relatively unimportant concept.

It is of interest that it was the less experienced salesagents who prefer to inspect property before listing or selling ($T = 0.2950$)[54] and cross-tabulations showed that males are more likely to inspect a property

or neighborhood than females. There were no other significant inter-variable relationships pertaining to this proposition.

Proposition 5: Advertising Techniques Affect Listings/ Sales

Separate questions were designed to measure the changes in responses to the usefulness of advertsing techniques for listings and sales. The results of the Kendall rank-order correlation analysis have been shown in Tables 54 and 55.

The results of these tables show a great deal of similarity between salesagents opinions of the usefulness of the various items to listings and to sales. There were several surprising results arising from this analysis. In both cases there was no relationship found between the usefulness of signs and referrals. These items were described by the salesagents as extremely important advertising techniques. Similarly, no relationship was evident between open houses and by owner ads on both tables. Again, agents had previously expressed the importance of these variables. It can only be assumed that some other influence has negated the relationship or that the questions on the questionnaires were not adequate for the intended purpose. For whatwever reason these particular results should be questioned.

In both cases, radio and T.V. as an advertising technique did not relate to the same three variables:

TABLE 54

KENDALL COEFFICIENTS FOR PROPOSITION 5--LISTINGS

	Referrals	By Owner Ads	Signs	Open House	Cold Calls	Mailers	Radio T.V.
referrals		0.3596*	0.1326	0.3097*	0.2765*	0.3982*	0.3077*
by owner ads			0.4263*	0.1301	0.2839*	0.3419*	0.5934*
signs				0.5760*	0.4500*	0.2546*	0.2345
open house					0.2001	0.1668	0.1663
cold calls						0.2499*	0.1584
mailers							0.3263*
radio/T.V.							

*indicates a relationship T≥0.2500

Source: Proposition 5, variables 1 through 7 for listings, see Appendix 2 for corresponding question numbers on questionnaire.

TABLE 55

KENDALL COEFFICIENTS FOR PROPOSITION 5--SALES

	Referrals	By Owner Ads	Signs	Open House	Cold Calls	Mailers	Radio T.V.
referrals		0.3190*	-0.0923	0.4986*	0.5165*	0.4102*	0.4714*
by owner ads			0.2592*	0.0954	0.5655*	0.5607*	0.2707*
signs				0.3912*	0.1888	0.3508*	0.1523
open house					0.3863*	0.2261	0.2244
cold calls						0.6182*	0.1460
mailers							0.4580*
radio/T.V.							

* indicates a relationship T≥0.2500

Source: Proposition 5, variables 1 through 7 for sales, see Appendix 2 for corresponding question numbers on questionnaire.

signs; open houses; and cold calls. It was felt that this was a result of the negative attitudes which prevail concerning the use of radio and T.V. advertising in real estate. This attitude was also evident in Chapter 3. Without the item regarding radio and T.V. there would have been a considerable improvement in the degree of relationship between the variables in this proposition.

The usefulness of advertising techniques for listings and sales did not relate significantly with many other variables in this study. The only major relationship which became evident was between the level of education achieved and the usefulness of referrals. Because of the nature of these variables many combinations did not result in relevant data and were not included in this summary.

Summary and Conclusion

This Chapter has outlined the relationships of the variables to the propositions. In no cases did less than 64 per cent of the variables interrelate favourably. Table 56 shows the results of the tests on these relationships.

This data indicates that the variables listed under the propositions have indeed provided the required information. It also shows the exceptions for which explanations have been made. These variables, on the basis of the information available to this study, provide

a strong indication that the questions on the questionnaires were effective and that the data groupings (propositions) were relevant.

TABLE 56

SUMMARY OF VARIABLE RELATIONSHIPS

	Proposition				
	1	2	3	4	5
number of relationships	15	21	15	21	21
insufficient data	0	2	0	1	0
number relating*	11	12	13	13	14
percentage relating*	73	64	87	65	66

Overall Average -- 71%

*at T≥0.2500

Source: Tables 50 through 55

Chapter 5 was a description of the analysis used to determine the strength of relationships within each propositon and the strength of relationships between each variable and six parameters. This measurement of the relevance of the variables to the questionnaires was conducted on the results of test 1. Indeed if the evaluation of these relationships had been substantially less successful, any further analysis would have been biased and the findings would therefore have been questionable.

A comparison between the Tau's for test 1 and test 2 was not made because the Wilcoxon paired-sample

test provided a much greater degree of efficiency.[55]

The Kendall rank-order correlation coefficient was determined to be the most valid test for the measurement of the relationships within each proposition.[56] This same test will be used in Chapter 6 to determine how each variable in each proposition relates to the major sub-questions--Listings and Sales.

CHAPTER 6

ANALYSIS OF PROPOSITIONS

Evaluation of the Propositions

The previous chapter provided an indication that the variables used in this study were related internally for the five propositions. This chapter will relate variables to the two major sub-groups: Listings and Sales. That is, variables which were used to measure the propositions will be tested to determine if there was any relationship between the variables and listings or sales. In Chapter 5 it has been determined that the variables are internally consistent and now it must be determined if the variables relate well to the two major sub-questions.

For each variable under a proposition heading there was one major question on the questionnaire. In five cases there was also one or more "check" questions which were intended to verify the responses. Because of the large number of calculations, in the tables which follow, only the major question has been reported. However, if a significantly different answer resulted from analysing the further questions, then all the answers were reported. (See Appendix 2 for question numbers on

the questionnaire.)

As a result of the limited period of time available for this study the two major sub-questions could not be evaluated in terms of absolute numbers of sales or listings. Further, new salesagents would have had to be ignored because there would not have been any values to use for comparison prior to the first test. Therefore, the variables have been related to questions which were more qualitative in nature. There were two questions asked of each salesagent: Do you feel that your listings have actually improved as a result of this course? Do you feel that your sales have actually improved as a result of this course? While absolute values may have produced a more accurate result, these questions as surrogates should provide an indication of the effects of the training program.

TABLE 57

WORK HABITS RELATED TO PERFORMANCE

Variable	Listings	Sales
Hours of Work	0.4261	0.2613*
Type of Work	0.4158*	0.3890*
Amount of Routine	0.1579	0.1468
Amount of Planning	0.2685*	0.2577*
Number of Calls	0.4348*	0.3261*
Listing Service Preference	0.2810*	n.a.

* indicates relationships T≥0.2500
n.a. indicates insufficient data to calculate T

A relationship was evident between hours of work and sales performance. In an industry where much of the time spent "on the job" in unproductive, a finding such as this becomes very important. The relationship showed that regardless of the unproductive time, the salesagents who worked the longest hours felt their performance had actually improved. No such relationship was found regarding listing performance. There was no apparent correlation between the amount of routine used by a salesagent in his work and listing or selling performance. There was however, a relationship between the amount of planning a salesagent did and his performance. These two findings are not inconsistent. A salesagent who plans work in advance does not require a routine. It was interesting to note that in both cases amount of planning was related to performance, and in Chapter 3, salesagents showed a tendency toward a weekly routine. All other variables in Proposition 1 were related to sales and listing perforance at a level of $T \geq 0.2500$.

TABLE 58

CLIENT RELATIONS RELATED TO PERFORMANCE

Variable	Listings	Sales
Provide Extra Services	0.155	0.1270
Availability to Client	0.2783*	0.3497*
Speed of Closing	0.3968*	0.5904*
Telephone vs. Personal Contacts	0.0517	0.1082
Pricing Policy	0.2500*	0.2864

*indicates relationships of $T \geq 0.2500$

Table 58 shows that the providing of extra services or gifts did not relate with performance in listings or sales. This was consistent with the analysis in Chapters 3 and 4 which showed that although most salesagents did provide extra services or gifts, few believed that this would have any effect on their sales or listing performance. The availability of the client and the speed of closing a listing or sales contract were both related to performance. Both were positive relationships although the structure of the questions resulted in a negative statistic. There was no difference detected in the use of the telephone and the use of personal contacts. Experienced salesagents had indicated however, that they felt personal contacts to be of more value than telephone contacts. In both the evaluation of listing performance and sales performance the use of "realistic" figures in presentations was related to performance. This finding underlines the importance of knowledge of the market value of property.

Although personal image variables were found to be the most internally consistent, they did not relate well to performance. Table 59 shows that only appearance was felt to have any effect on sales or listing performance. All other variables, including education, did not relate to performance. The education variable as mentioned previously, was considered by many managers

TABLE 59

PERSONAL IMAGE RELATED TO PERFORMANCE

Variable	Listings	Sales
Attitude to Company	0.1771	0.0906
Attitude to Industry	0.1645	0.0187
Attitude to Real Estate as Occupation	0.1929	0.1754
Occupational Desirability	0.1400	0.1074
Appearance	0.4201*	0.4297*
Education	0.0333	0.0341

*indicates a relationship of $T \geq 0.2500$

as a good indication of performance. The analysis showed that no such relationship existed within the framework of this study. The proposition concerning personal image variables did not appear to affect either sales or listing performance.

TABLE 60

PRODUCT KNOWLEDGE RELATED TO PERFORMANCE

Variable	Listings	Sales
Legal Knowledge	0.3000*	0.3714*
Characteristics of Property	0.1166	0.2585*
Characteristics of Neighborhood	0.2640*	0.2859*
Concentration of Sales	0.3007	0.2714*
Training Level in Firm	0.0964	0.2499*
Training Level in Industry	0.2835*	0.1121
Experience in the Field	0.2831*	0.2500*

*indicates a relationship of $T \geq 0.2500$

The variables in Proposition 4 relate favourably to the performance measurements. Only three of fourteen relationships reported in Table 60 fell below

T≥0.2500. Knowledge of the characteristics of a property appeared not to have any effect on listing performance. This finding confirms earlier analysis which showed that salesagents regarded knowledge of the characteristics of property as vital in dealing with sales, but less important when obtaining a listing. The amount of training provided by the firm did not show any correlation with listing performance. It is anticipated that this result is incorrect. In other analysis in Chapters 3 and 4, and in informal conversations, salesagents described the training as helpful in obtaining listings and sales. The wording of the particular questions on the questionnaire may have affected this result.

The training level found in the industry did not seem to relate to sales performance. This confirms the analysis in previous chapters. The level of training now provided by the industry consists only of a licensing course. The view that this course was insufficient for the needs of salesagents has been expressed often, both on the questionnaires and in conversations.

It was interesting to note that one of the most popular methods of prospecting for sales (the use of by owner ads) did not relate to sales performance in this analysis. For all other variables (except cold calls 0.2368) there was a relationship evident between sales and listing performance.

TABLE 61

ADVERTISING TECHNIQUES RELATED TO PERFORMANCE

Variable	Listings	Sales
Referrals	0.4011*	0.3259*
By Owner Ads	0.1409	0.0909
Signs	0.2926*	0.2520*
Open Houses	0.4263*	0.5252*
Cold Calls	0.4148*	0.2368
Mailers	0.5256*	0.5674*
Radio/T.V.	0.2587*	0.3947*

*indicates a relationship of $T \geq 0.2500$

Summary

On the basis of this analysis, four of the propositions have been found to have an effect on listing and sales performance and one proposition was found to be unrelated. The results are summarized below:

Proposition 1: Work Habits Affect Listings/Sales. This proposition was found to be true given the statistical analysis. The work habits of an individual sales-agent have an effect on his listing and sales performance. For listing performance four of six variables showed a relationship and for sales performance four of six variables showed a relationship.

Proposition 2: Client Relations Affect Listings/Sales. This proposition was also declared true on the basis of the relationships shown. The way that a sales-agent interacts with his clients has an effect on his sales and listing performance. For both listings and

sales, three out of five variables had a Tau value of ≥0.2500.

Proposition 3: Personal Image Affects Listings/Sales. Personal image variables exhibited no relationships with listing or sales performance. On the basis of this research it can be stated that a salesagent's attitudes and opinions about himself and others did not have an effect on his sales or listings. Of the six variables for sales and listings under this proposition only appearance showed a relationship to performance.

Proposition 4: Product Knowledge Affects Listings/Sales. Five out of seven variables relating product knowledge to listing performance showed a significant relationship. Six of the seven variables showed a relationship with sales performance. It was evident from the analysis that product knowledge strongly affected performance.

Proposition 5: Advertising Techniques Affect Listings/Sales. Advertising techniques related better to listing performance than to sales performance. Six of seven variables related for listings while five of seven related for sales. This data provided an indication that advertising techniques do affect a salesagents performance.

This chapter provided an analysis of each proposition to determine the relationships which exist between the variables, and sales and listing performance.

It was found that four of the propositions accurately described the data and these were therefore "accepted." One proposition showed no relationship with listing or sales performance and was "rejected."

Chapter 5 showed that the propositions were internally consistent. Chapter 6 showed that four of the five propositions had variables which related at a level of ≥0.2500 to improved sales or listings. In Chapter 8 the analysis will use these basic findings in an evaluation of the total effects of the training program on the salesagents.

Chapter 6 evaluated the results of test 1 only. The changes in the relationships between test 1 and test 2 can be more accurately described by the Wilcoxon paired-sample test.[57]

CHAPTER 7

SUMMARY OF RESULTS OF FILM QUESTIONNAIRES

Introduction

The Film Questionnaires were administered directly after the showing of each film in each training session. Copies of the questionnaires can be found in Appendix 2 as Exhibits 3 and 4. These questionnaires were intended to provide the researcher with additional data concerning the effectiveness of audio-video in-house training programs. The respondents completed the questionnaires in the same manner as the two general questionnaires were completed, and the data collection was also supervised in the same manner. Data was key-punched, verified and analysed from computer cards in the same manner as the other questionnaires.

Since each film was shown twice, the most significant analysis consisted of the differences between the responses concerning a single film. However, some interesting relationships became evident as a result of analysing all the film data as a sequential progression.

The films were shown twice a week, early in the morning to the participating salesagents. The

attendance at the film showings was fairly constant through the first seven sessions. However, on the last three film sessions the attendance dropped markedly. When the film presentations were begun, the weather was cool and snow was still in evidence. However, in the last week of the program, the weather improved considerably, the snow melted, and the attendance dropped. It was anticipated that the fair weather encouraged the salesagents to spend more hours "on the job" and fewer hours "at the office." This was verified by conversations with managers. Summer is an excellent time for the real estate industry, and the firms encourage their agents to "cold call" in the spring to generate new business.

The summary of attendance is shown below in Table 62.

TABLE 62

ATTENDANCE AT FILM PRESENTATIONS

	Session									
	1	2	3	4	5	6	7	8	9	10
attendance	17	23	20	20	18	17	20	12	11	14
average attendance 16.2										

Questionnaire Evaluation

The computer program "MARGINALS"[58] was used to evaluate the data collected on the film questionnaires.

There were ten questionnaires each with twenty-eight questions. For each question on each questionnaire the mean, standard error, median, standard deviation and other statistics were calculated. In total over 1,600 separate calculations were made. Most of these calculations did not add appreciably to the analysis of data and therefore were not reported. However a summary of the means of the responses for each question on each questionnaire is provided in Table 63 and a summary of the modes of responses is provided in Table 64. These two tables exhibit considerable congruence in illustrating the trends which developed.

The film questionnaires were analysed in order of the questions 1 through 16. (A copy of the Film Questionnaires may be found in Appendix 2, labelled Exhibits 3 and 4.) Only relevant data were included here and therefore some questions were not represented in the analysis. However, the programs used and a complete data list have been included as Appendices to this research.

The films were new to most of the salesagents. This was evident in the mean responses for the films. Sessions 4 and 9 which showed the same films and sessions 5 and 10 which showed the same films were very new to the group. Only three salesagents had seen these films before.

TABLE 63

MEANS OF RESPONSES FROM FILM QUESTIONNAIRES

Question Numbers	Questionnaire Number									
	1	2	3	4	5	6	7	8	9	10
1	0.83	1.77	1.75	0.32	0.30	1.00	2.75	2.27	1.60	1.42
2	2.50	2.09	1.50	2.00	2.15	2.05	2.30	1.54	1.30	1.64
3	5.41	4.73	5.20	4.63	5.50	5.28	5.50	5.54	5.10	6.00
4	1.58	1.41	1.30	1.32	1.90	1.33	1.50	1.37	1.40	1.36
5	2.50	2.63	2.70	2.63	2.40	2.33	2.50	2.27	2.20	2.86
6	2.33	2.55	2.75	2.68	2.50	2.29	2.25	2.27	2.20	2.93
7	2.33	2.45	2.50	2.68	2.70	2.06	2.25	2.09	2.20	2.64
8	2.17	3.77	2.40	2.68	2.75	2.06	2.40	2.27	2.30	2.86
9	3.92	3.77	3.60	3.89	4.05	3.94	3.80	4.00	3.80	3.85
10	1.58	1.58	1.55	1.84	1.80	1.44	1.55	1.28	1.70	1.36
11	1.00	1.17	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12	3.91	4.18	3.95	4.00	3.80	3.72	3.90	4.00	4.00	4.07
13	2.58	2.46	2.05	3.00	3.00	2.95	2.40	2.72	2.00	2.85
14a	1.00	1.13	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.14
14b	1.66	1.36	1.50	1.84	1.50	1.67	1.65	1.46	1.50	1.29
14c	1.58	1.45	1.45	1.89	1.65	1.94	1.86	2.00	2.00	1.71
14d	1.75	1.72	2.00	1.05	2.15	2.28	1.70	2.09	2.60	2.36
14e	1.00	1.09	1.05	2.89	1.05	1.27	1.05	1.00	1.00	1.21
15a	2.58	1.18	3.90	3.45	4.85	3.11	1.45	3.54	3.20	4.28
15b	3.42	1.91	2.00	4.73	4.10	3.89	1.95	2.27	3.00	3.21
15c	4.50	4.13	4.05	5.60	5.80	4.78	4.70	3.91	4.30	5.14
15d	4.67	3.73	4.65	3.16	6.00	5.56	4.45	4.90	5.60	5.07
15e	2.67	1.14	1.45	1.94	3.20	3.22	1.30	1.36	2.70	3.14
16a	2.00	1.90	1.90	2.84	1.55	2.06	1.90	1.64	1.60	1.85
16b	2.67	2.27	2.00	2.68	2.20	2.61	2.35	1.91	2.30	2.77
16c	2.67	2.31	2.60	1.29	2.35	3.06	2.70	2.18	3.30	3.00
16d	2.83	2.63	3.10	3.21	3.00	3.44	2.85	2.63	3.20	3.43
16e	2.00	1.62	1.59	1.77	1.55	1.66	1.47	1.00	1.60	1.71

Source: Salesagents Film Questionnaire, Appendix 2

TABLE 64

MODES OF RESPONSES FROM FILM QUESTIONNAIRE

Question Number	1	2	3	4	5	6	7	8	9	10
1	0	1	1	1	0	1	2	2	1	1
2	1	1	1	1	1	1	1	1	1	1
3	7	6	6	6	6	6	6	6	4	6
4	1	1	1	1	1	1	1	1	1	1
5	2	2	4	4	4	1	1	2	2	1
6	2	4	1	2	1	2	2	1	2	1
7	2	1	1	1	4	1	1	1	1	2
8	2	1	2	1	4	1	1	2	1	4
9	4	4	4	4	4	4	4	4	4	4
10	1	2	1	2	1	1	1	1	1	1
11	1	1	1	1	1	1	1	1	1	1
12	4	4	4	4	4	4	4	4	4	4
13	3	3	2	3	2	3	3	2	1	2
14a	1	1	1	1	1	1	1	1	1	1
14b	1	1	1	1	1	1	1	1	1	1
14c	1	1	1	1	1	1	1	1	1	1
14d	1	1	1	1	1	1	1	1	1	1
14e	1	1	1	1	1	1	1	1	1	1
15a	1	1	7	2	7	1	1	5	1	7
15b	1	1	1	2	7	1	1	1	1	7
15c	4	7	7	7	7	4	5	7	7	7
15d	7	4	7	7	7	7	4	7	7	7
15e	2	1	1	1	1	1	1	1	1	1
16a	1	1	1	1	1	1	1	1	1	1
16b	2	1	2	2	1	1	2	2	2	1
16c	4	1	1	4	1	4	1	1	4	1
16d	4	1	2	4	4	4	1	2	4	4
16e	1	1	1	1	1	1	1	1	1	1

Source: Salesagents Film Questionnaire
Appendix 2

In the following discussion, the questions being analysed will be noted in brackets. As was mentioned, only data which exhibited congruence to earlier analysis or marked differences from it was reported. The question numbers refer to the Salesagents Film Questionnaire which is included in Appendix 2 of this report as Exhibit 3.

In general, sales personnel favoured the viewing of the films again. The mean became lower during the second showing of the films indicating a stronger desire to repeat the films. The mode remained constant (Q2).

Agents showed surprising consistency in suggesting that the time period for a repeat of a film should be between three weeks and a month. Responses did not change appreciably over the five week period (Q3).

In all five of the films, agents found information which they thought would be helpful to them increasing their performance. The agents verified this view by showing a fairly strong response to the questions concerning the actual increases in sales and listings. In all cases salesagents felt that the sessions were helpful in improving their actual performance (Q5-Q8).

No significant results were obtained in defining who benefited most from a training session of this nature. Most agents felt that everyone--both new and

established salesagents--would benefit (Q9).

In all ten questionnaires the responses to the general quality of the film were positive. In all cases the respondents felt that the films were better the second time than the first. This indicates that a repeat viewing allows sales personnel to "see things they missed the first time" (Q10).

Universally, the sales personnel tested felt that the best time to show the films was in the early morning before a daily routine starts (Q11). The films were all approximately twenty minutes long and agents felt that this was "about right" for the length of a training film (Q12). However, in all cases agents responded that there was a need for some discussion after the films. Because of the time allowed for the showing of films discussion was generally very short and the sales personnel indicated a need for discussion in comments on the questionnaire as well as in answers to the question (Q13).

Not surprisingly, sales personnel evaluated the following items highly in all cases: Obtaining Listings, Sales Aids, Advertising, Legal Knowledge and Product Knowledge (Q14).

Obtaining listings was judged to be the most important factor in the success of a Real Estate sales person. Product knowledge was described as second most

important with the other factors following closely in importance (Q15).

The series of questions regarding the effectiveness of the films in covering certain items was designed as a check question. Naturally, some films covered certain areas better than did others and the researcher was aware of this fact. If responses to all the questions had been positive it might have shown a tendency toward circling the more positive number and feeding results which the salesagent felt the researcher wanted. Although there were few really negative responses, there was enough dispersion in answers between films to show that indeed the films were evaluated independently by each salesagent (Q15).

One of the most important questions on the Film Questionnaire dealt with the review of some of the fundamental items in selling real estate. Surprisingly, the agents tested here felt that a review of these items was necessary every three to four weeks. The items are: Obtaining Listings, Sales Aids, Advertising, Legal Knowledge and Product Knowledge. The comments on the questionnaires revealed that agents felt that at least once a month and <u>continuously</u> there should be a review session involving some items of importance to the industry. Of all the findings in the research this is perhaps the most significant. Sales training, as

mentioned in early chapters typically consists of only the real estate licensing course and in some instances an on-the-job training program of variable quality and length. The film questionnaire shows that salesagents want to have training programs accessible at recurring intervals on a continuous basis.

General Comments

The Film Questionnaires contained space for comments and some of the more significant are noted here.

Eleven salesagents remarked on the fact that the films were out of date for today's market and prices. This is a valid criticism and worthy of note. Newer films were either screened out as inappropriate, too long or too costly, but the resulting presentations suffered only minimally.

The films seemed to have a generally positive affect on sales personnel. Seven agents stated that the films "made me feel important" or "have helped to improve my mental attitude." Four agents responses included other general statements about attitude and self-image, and one remarked that "production is improving."

Five of the replies confirmed that agents felt the films were effective and should be repeated. "Can't see these films too many times" and "Serves as a needed refresher for your methods" were two of the six statements to that effect.

There were critical statements concerning the training package as well. At least two agents suggested a more "Canadian" content would improve the films. However, it was doubtful that the small differences in the marketing of properties between the U.S. and Canada would have added substantially to the value of the films. The only major differences which might have been of some value concerned the legal aspects of real estate. Since these were not part of the training session this criticism was considered to be outside the scope of this study.

Three salesagents suggested that the films should be "more specialized" and should "stress fundamentals." On further investigation it became apparent that these criticisms came from new salesagents. It was anticipated that the films where these comments occurred, more than one topic was discussed and these new salesagents felt "flooded" with information. Most other salesagents agreed with the researcher that the one or two topics covered in most films caused few problems.

It was stated by at least nine of the participating salesagents that the upgrading of the provincial licensing requirements was essential. The training provided presently produces "too many unqualified sales personnel." These people are "uninformed and unethical

and damage the image of the professional realtor."

Finally, all thirteen of the salesagents who completed the training course stated in comments as well as in the questionnaires that follow-up courses are needed in the industry. The problem of the reduction in the sample size must be evaluated here, in light of the overwhelmingly positive responses reported. One real estate manager stated, "It is precisely those individuals who didn't finish the course who should have stayed." It may be anticipated that more negative replies might have been placed in the comments of the drop outs. However, in view of the manager's comments, these negative responses would not have added substantially to this analysis of the films.

The fact that the firm studied in this report uses training films extensively should add credibility to the responses of the salesagents. These agents have been exposed to training films and seminars in the past and are therefore better able to make qualitative assessments of the sessions. This fact allowed the researcher the luxury of "believing" the responses and not having to make biased interpretive evaluations for much of the data.

CHAPTER 8

PAIRED SAMPLE ANALYSIS

In Chapter 5 it was shown that with the use of the Kendall rank-order correlation coefficients, that all the propositions were internally consistent with respect to its variables. Chapter 6 showed that the propositions in four out of five cases related strongly to the two sub-questions regarding improvement in listings and sales. Chapter 7 showed through a descriptive analysis that salesagents felt that the training course had been valuable. In this chapter the paired sample analysis was intended to provide a measure for the effects of the total audio-video in-house sales training program on the salesagents.

The Wilcoxon Matched-Pairs Signed-Ranks Test was chosen for analysis for a number of reasons. Siegel has stated that for a small sample the efficiency of the Wilcoxon test approximates 95 per cent.[59] In addition, the Wilcoxon test provides a good test of both the magnitude and direction.[60] Furthermore, it is one of the easiest and most statistically valid of the paired-sample tests and therefore fits extremely well with the information gathered at two time points from the same

individual. (A matched pair of data.)[61]

The Kendall Rank-Order Correlation Coefficients and the Wilcoxon Matched-Pairs Signed-Ranks Test has provided a degree of validity to this research by the similarity of their assessments of the training. The Kendall's Tau values provided an internal and micro analysis of the propositions and questionnaires, while the Wilcoxon Statistic provided an overview of the effects in a cumulative fashion. It is suggested that the results of this study be viewed with the knowledge that the application of these two tests has provided positive results.

The Wilcoxon Matched-Pairs Signed-Ranks Test is a very useful technique for the social science researcher.[62] It is a test which measures the differences between a matched pair of samples in two unique conditions. Usually a measurement is taken at time period 1, and an experiment is conducted. Then, a second measurement is taken at time 2, and the matched pairs are analysed. Siegel has provided an excellent description of the statistical technique.[63]

In this research the paired samples were the salesagents who completed the Salesagents General Questionnaire at both the beginning and end of the training sessions. From the original twenty-five agents who started the training sessions, only thirteen completed the questionnaire the second time. Thus, there

were thirteen matched pairs of data (test 1 and test 2) analysed by the Wilcoxon paired sample methods.

The statistical analysis produced the results shown in Table 65. The "T" represents the Wilcoxon Statistic and the "N" shows the number of non-zero pairs in that particular set of data.

TABLE 65

AGGREGATE WILCOXON MATCHED-PAIRS SIGNED-RANKS ANALYSIS

Pair Number	T	N	H_o (at 5%)
1	10.5	11	reject
2	6.5	4	*
3	29.5	17	reject
4	28.5	22	reject
5	35.5	18	reject
6	7.0	10	reject
7	59.5	17	accept
8	34.5	17	reject
9	48.5	20	reject
10	20.5	12	accept
11	7.5	10	reject
12	26.5	17	reject
13	61.0	18	accept

* N too small for significant result

9 reject H_o	3 accept H_o	1 insufficient N

Source: Thirteen matched pairs of answers to Sales-agents General Questionnaire

As mentioned in Chapter 1, the conceptual hypothesis was structured to state that a change does occur. This was done for the sake of readability. It would be simpler to discuss research in terms of positive changes rather than discuss it in terms of no change.

While the conceptual hypothesis was worded in the "positive" for simplicity, a return must be made here to the more mathematically correct method of discussing hypotheses in order that the Wilcoxon statistics may be analysed. The column "H_o" in Table 65 shows whether or not the null hypothesis of no change between test 1 and test 2 has been accepted or rejected.

The significance of these results is that by rejecting the null hypothesis of no change the alternative hypothesis must be accepted. In this case the alternative hypothesis was that a change occurred in the responses as a result of the training sessions. Because these were matched pairs of data, it was the changes which took place as a result of the training session that caused the hypotheses to be accepted or rejected. The training sessions had a measurable affect on one of the pairs, no measurable affect on three of the pairs and one sample pair was discarded because of too few non-zero differences.

This data indicates that the training sessions did have an affect on salesagents. Their attitudes and opinions did change over the five week period. This analysis confirms the results of the film questionnaire analysis found in Chapter 7.

The Wilcoxon test was also administered separately on each of the propositions. However, the

numbers of non-zero pairs became very small in most cases negating the results (Appendix 6, Exhibit 1-5). The small number of non-zero differences reveals tendencies toward no change in the questionnaire responses, thus indicating that in smaller analytical units the hypothesis would normally be accepted (i.e. no change). This break down of the general hypothesis into its component parts (the propositions) did not add appreciably to this analysis.

Finally, the Wilcoxon test was administered on the results of the Film Questionnaires. Since the film series consisted of five films each shown twice a matched sample was available for analysis. However, as in the above case the number of non-zero pairs in the analysis became too small for significant results to be obrained. The analysis is not included since all pairs resulted in insignificant results.

In order to obtain significant results from an analysis of smaller units such as a proposition or the film sample, the range of responses available on the questionnaires would have had to increase to at least double (14). This would have made definitive choices on the questionnaires difficult for the respondents and would have biased the results accordingly.[64]

CHAPTER 9

SUMMARY AND CONCLUSIONS

Summary

The research undertaken in this study was an empirically based pilot project. It depended upon observation from a small sample. However, because hypotheses were constructed and tested the research can also be considered as being experimental. The propositions were constructed and tested by the use of empirical data. The small sample size necessitated that the findings presented should be used only as indicators of the effects of in-house audio-video training programs on real estate sales personnel.

The study was experimental, descriptive and its orientation was micro in scope. Each part of the study was an extension of the previous part and no part should be evaluated independently of the other parts.

The problem for research was to determine the effects of training on sales personnel. A restatement of the original research question is made here:

> Can an audio-video in-house sales training program influence the sales performance of real estate salesagents?

Subsequent to stating the research question

an analytical framework was developed in which the research was discussed in parts. Two sub-questions (hypotheses) were developed. The first sub-question concerned improvement in obtaining listings, and the second sub-question concerned improvement in sales. The two sub-questions together were deemed to be an indication of sales performance within the context of this research.

Under each of these major sub-questions the variables used to measure the affects of the training program were discussed in five major groupings or propositions.

Chapter 3 contained a description of the changes which occurred between test 1 and test 2 in the training questionnaires for listings.

Chapter 4 contained the changes which occurred respecting sales between test 1 and test 2.

Chapter 5 provided an analysis of the variables within each of the five propositions for listings and for sales. The results of the Kendall rank-order correlation coefficient showed a high degree of internal consistency in all the propositions. The variables were never less than 64 per cent consistent, and the average was 71 per cent. This provided a satisfactory basis on which to continue the research.

Chapter 6 evaluated the extent to which the

variables in each of the propositions related to actual sales and listing performance. It was found that four of the five propositions were strongly related to overall performance as measured by sales and listings. Only personal image exhibited no relationships with improved sales or listings. The findings in Chapters 5 and 6 provided the necessary statistical evidence to suggest that the questionnaires and the variables were relevant to the research project.

Chapter 7 contained an analysis of the Film Questionnaires. This data provided the researchers with additional data on the effectiveness of audio-video in-house sales training. This material was extremely valuable in aiding in the interpretation of the findings of the study.

Chapter 8 provided the results of the Wilcoxon Matched-Pairs Analysis. This evaluation showed that nine of twelve significant pairs of data assessed the training sessions as having had a positive effect. The congruence of the Wilcoxon Test and the Kendall's Rank-Order Correlation coefficients provided additional support for the validity of this research.

Evaluation of Results

The results of this research provide real estate firms with an indication of the effectiveness of audio-video in-house sales training programs on their

salesforces. Ten propositions were discussed and tested using Kendall coefficients, and a concurrent test which used Wilcoxon statistics verified the Kendall rank-order analysis. Although the sample was small, the data generated gives interesting insight into some of the factors which affect the sales performance of an individual. The results presented should provide real estate firms with a direction for further training and for research in this area.

Two factors which were not analysed in this study and which might have added considerably to the interpretation of results were the compensation of salesagents and number of salesagents per office.

Compensation of salesagents should have an effect on sales performance. It was not researched here as it was viewed as being outside of the conceptual framework of this paper. The emphasis in this research was on the individual. Compensation is a subject which must be viewed from the firm's perspective as well as the individual's. Combined in a study of employee compensation must be such factors as commission schedules and pay-out techniques. Undoubtedly, the performance of individuals was influenced by these factors, and therefore major research should be encouraged in this area.

A further topic for future research is the

question of optimal office size. Since this research was carried out under specific conditions which included a large office, it would be interesting to expand the research and study offices employing smaller numbers of salesagents.

More research should be encouraged in the area of content of training programs for real estate. The results of this research indicated that audio-video in-house sales training is viewed as valuable by sales-agents. The next logical step in development should be to discover what content is required by real estate salesagents.

Although this research raised many questions about further study it did contribute to the knowledge of real estate sales performance. In general, the research was experimental in nature, micro in scope, and limited in scale. However, it did provide an interesting and valid analysis of a specific method of sales training which should be of some value to real estate firms. Naturally, much more research can and should be done in this area but it is felt that the analysis presented here provides a basic and integral step toward a more complete understanding of the problem.

Future research in the area is required to provide a broader sample of analysis. The research

should be carried out over a large number of firms and for a larger group or several groups of salesagents. It may be appropriate to consider a larger number of variables for measurement and use factor analysis to provide a smaller number as proxies for the research.

Evaluation of Research Methodology

The research methodology consisted of the administering of a questionnaire before and after the training course, and a film questionnaire administered after each of ten training sessions. All of the participating salesagents completed these questionnaires. This method of data collection was found to be effective. Data were generated through the use of the computer and several statistical programs.

In general, the two major statistical techniques, the Kendall Rank-Order Correlation Coefficients and the Wilcoxon Matched-Pairs Signed-Ranks Test, were effective and complimentary in the analysis of data.[65]

The Kendall correlation analysis provided a single summary statistic describing the strength of association of two variables. It was chosen since the number of categories into which data could be grouped was limited to seven for most questions on the questionnaire. Kendall's Tau values have been shown to be somewhat more meaningful than other statistical techniques when the data are grouped into limited categories, where

there is the possibility of a large number of similar responses, and where value judgements occur.[66]

The Kendall coefficients were used to describe the association between the variables within each of the propositions. It was found that these variables related favourably, indicating that the variables were indeed measuring the particular proposition. Kendall coefficients were also used to measure the relationship between the variables and performance indicators. It was found that four of the propositions could be described as relating to sales performance as a result of the analysis. One proposition was found to have had no effect.

The Wilcoxon Statistics were used to evaluate the changes in responses between the beginning and ending questionnaires for the individual salesagents. There were thirteen paired samples, of which nine showed the training sessions had affected performance. Three samples showed the training had no effect and one sample contained insufficient data. The Wilcoxon Statistics provided an overview of the effects of the training sessions and verified the results obtained by the evaluation of the Kendall coefficients.

The other statistical techniques used in this study were straightforward. There were computer programs which provided a one way analysis of the data,

organized it into frequency distributions and provided numerous statistics such as the mean, median and mode for each case. The data which was gained from such analysis was summarized in the text of this report and will not be repeated here. It is important to note however, that these frequency distributions and comparisons between the beginning and ending tests form an integral part of the research. As such they should be evaluated with the results of both the Wilcoxon Test and the Kendall Coefficients (Tau).

The study was successful for three reasons. First, the relatively strong positive relationships between sales performance and the variables discussed became evident through the analysis. A clearer understanding has been obtained regarding those factors which through training can be expected to influence sales performance. Second, evaluation of attitudes showed that real estate salesagents have a strong desire to continue learning throughout their careers. Three, it has been shown that sales training can affect the attitudes and behaviour of sales personnel with respect to four of the five areas of discussion: Work Habits, Client Relations, Product Knowledge and Advertising Techniques.

This study should provide the real estate industry with the necessary evidence required to initiate activity in the area of sales training programs. It

has shown that the use of the audio-video method of sales training can be a valuable aid to real estate sales managers in improving the attitudes, knowledge and productivity in sales forces. A specific area of need can be identified and a program of improvement can be concentrated in that area. It provides a starting point from which future research might be undertaken.

Several areas of future study became evident during this research. An updating of the training films might produce interesting results. As well, a program which contained Canadian films might show changes in the results of the study. More specialized sessions which fulfilled a particular need could show exceptional results. Additionally, a study which compared and contrasted the above methods to the one used in this research would add much to the knowledge of training theory.

The knowledge contributed by this study should be of valuable assistance to real estate firms in planning their sales training programs and ultimately improving their sales performance. As an evaluative instrument it has provided some information regarding the effectiveness of audio-video in-house sales training on real estate sales personnel.

FOOTNOTES

[1]Dow Chemicals, Imperial Oil, Block Brothers Industries and others.

[2]J. C. Aspley, Aspley on Sales (Chicago: Dartnell Corporation, 1967).

[3]Philip Kotler, Marketing Management Analysis, Planning and Control (Englewood Cliffs: Prentice-Hall, 1972), pp. 723-724.

[4]Ibid.

[5]Ibid.

[6]Ibid.

[7]Larger multi-company group training sessions are generally offered by outside agencies. Examples are The Nightingale Public Speaking Courses, Dartnell Corporation Sales Courses, and Carnegie Sales Courses.

[8]The B. C. Real Estate Institute have a series of training films available. These films are experimental in nature.

[9]Conversations with representatives from several Edmonton real estate companies.

[10]P. Micheal Maher, and Richard J. Long, Factors Affecting Performance of Real Estate Sales Organizations: Results from an Empirical Study (Edmonton: University of Alberta, 1973).

[11]This was revealed in conversations with managers from several real estate agencies in the Edmonton area.

[12]Richard J. Long, "A Study of Variables Strategic to Real Estate Organizations" (M.B.A. thesis, University of Alberta, 1973).

[13]Ibid.

[14]Ibid.

[15]Conversations with representatives from several Edmonton real estate companies.

[16]Long, op. cit.

[17]Ibid.

[18]Ibid.

[19]K. B. Hass, How to Develop Successful Salesmen (New York: McGraw-Hill, 1957).

[20]Seminars, lectures, role playing and teaching machines are some of the other methods presently being used in sales training.

[21]Conversations with representatives from several Edmonton real estate companies revealed that the audio-video system was the most effective for this type of training program.

[22]David B. Huntsberger, Elements of Statistical Inference (Boston: Allyn and Bacon, Inc., 1967).

[23]The five propositions are: Work Habits Affect Sales/Listings; Client Relations Affect Sales/Listings; Personal Image Affects Sales/Listings; Product Knowledge Affects Sales/Listings; and Advertising Techniques Affect Sales/Listings.

[24]Sidney Siegel, Nonparametric Statistics for Behavioral Sciences (New York: McGraw-Hill, 1956).

[25]Block Bros. Real Estate, sales manager, training manager, general manager; Melton Real Estate, area manager, branch manager; Royal Trust Real Estate, branch manager, district manager; Weber Brothers Real Estate, branch manager.

[26]Each of the major propositions was analysed separately and in two parts. Thus, each proposition generated results for its effect on both listings and sales. The hypotheses were restated as propositions for purposes of research and analysis. See footnote 23 for listing.

[27]Siegel, op. cit.

[28]Ibid.

[29]Long, op. cit.

[30]W. J. Reichmann, Use and Abuse of Statistics (Middlesex: Penguin Books Ltd., 1959).

[31]Norman H. Nie; Dale H. Bent; and C. Hadlai Hull, Statistical Package for the Social Sciences (New York: McGraw-Hill, 1970).

[32]Division of Educational Research Services, Program Documentation 360/67 (Edmonton: University of Alberta, 1969).

[33]Nie, Bent, and Hull, op. cit.

[34]Ibid.

[35]Siegel, op. cit.

[36]Nie, Bent, and Hull, op. cit.

[37]Long, op. cit.

[38]Several issues of Industrial Distribution, Real Estate, Industry Week and Sales Management magazines.

[39]Long, op. cit.

[40]Siegel, op. cit.

[41]Ibid.

[42]Siegel, op. cit.

[43]Results from six parameters, Kendall rank-order correlation coefficients with all variables in proposition 1 where $T \geq 0.2500$.

[44]Ibid.

[45]Ibid.

[46]Ibid., Proposition 2.

[47]Ibid.

[48]Ibid.

[49]Ibid.

[50]Ibid.

[51]Ibid.

[52]Ibid., Proposition 3.

[53]Ibid.

[54]Ibid., Proposition 4.

[55]Siegel, op. cit.

[56]Ibid., pp. 213-222.

[57]Ibid., p. 75.

[58]Nie, Bent, and Hull, op. cit.

[59]Siegel, op. cit., p. 83.

[60]Ibid., p. 75.

[61]Ibid.

[62]Ibid.

[63]Ibid.

[64]Ibid.

[65]Ibid.

[66]Ibid.

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APPENDIX 1

PROPOSITIONS AND VARIABLES

RELATIONSHIP OF PROPOSITIONS, VARIABLES AND QUESTIONNAIRE ITEMS

SGQ--SALESAGENTS GENERAL QUESTIONNAIRE
MGQ--MANAGERS GENERAL QUESTIONNAIRE

Proposition	Variables	SGQ	MGQ
Propositions Regarding Listings			
1. Work Habits Affect Listings	a. hours of work	7a	10, 14
	b. type of work	6, 7bcd	11, 9
	c. amount of routine	10	12, 13
	d. amount of planning	11	7, 15
	e. number of calls	13, 14	
	f. listing service preference	30	
2. Client Relations Affect Listings	a. provide extra services	18	
	b. availability to client	15	
	c. speed of closing	8	
	d. telephone vs. personal contacts	12	
	e. pricing policy	16	23
3. Personal Image Affects Listings	a. attitude to company	19	20
	b. attitude to industry	20, 21	21
	c. attitude to R.E. as occupation	22, 23	26
	d. occupational desirability	24	
	e. appearance	25	22
	d. education	38	32

Proposition	Variables	SGQ	MGQ
4. Product Knowledge Affects Listings	a. legal knowledge	26	
	b. characteristics of property	28	
	c. characteristics of neighborhood	29	
	d. concentration of sales	27	25
	e. training level in company	33, 36	8, 16, 18
	f. training level in industry	34, 35	17, 19, 30
	g. experience in field	1, 2, 3	1, 2, 3
5. Advertising Techniques Affects Listings	a. referrals	31	28
	b. by owner ads	31	28
	c. signs	31	28
	d. open house	31	28
	e. cold calls	31	28
	f. mailers	31	28
	g. radio/T.V.	31	28
Propositions Regarding Sales			
1. Work Habits Affect Sales	a. hours of work	7a	10, 14
	b. type of work	6, 7bcd	11, 9
	c. amount of routine	10	12, 13
	d. amount of planning	11	7, 15
	e. number of calls	13, 14	
	f. listing service preference	30	
2. Client Relations Affect Sales	a. provide extra services	18	
	b. availability to client	15	
	c. speed of closing	8	
	d. telephone vs. personal contacts	12	
	e. pricing policy	17	24

Proposition	Variable	SGQ	MGQ
3. Personal Image	a. attitude to company	19	20
	b. attitude to industry	20, 21	21
	c. attitude to R.E. as an occupation	22, 23	26
	d. occupational desirability	24	
	e. appearance	25	22
	f. education	38	32
4. Product Knowledge Affects Sales	a. legal knowledge	26	
	b. characteristics of property	28	
	c. characteristics of neighborhood	29	
	d. concentration of sales	27	25
	e. training level in company	33, 36	8, 16, 18
	f. training level in industry	34, 35	17, 19, 30
	g. experience in field	1, 2, 3	1, 2, 3
5. Advertising Technques Affect Sales	a. referrals	32	29
	b. by owner ads	32	29
	c. signs	32	29
	d. open house	32	29
	e. cold calls	32	29
	f. radio/T.V.	32	29

APPENDIX 2

RESEARCH INSTRUMENTS

SALESAGENTS GENERAL QUESTIONNAIRE

This questionnaire has been designed to assist in a study of the effects of in-house sales training programs on Real Estate sales people. The study is being carried out by the University of Alberta Faculty of Business Administration and Commerce in conjunction with the Alberta Real Estate Association. The management of this firm has given us full cooperation on this project.

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THANK YOU VERY MUCH FOR YOUR HELP.

James Mitchelson

1. How long have you worked in the Real Estate industry?

1-3 mos	3-6 mos	6-12 mos	1-2 yrs	2-5 yrs	5-10 yrs	10+ yrs
1	2	3	4	5	6	7

2. How long have you been with your present employer?

1-3 mos	3-6 mos	6-12 mos	1-2 yrs	2-5 yrs	5-10 yrs	10+ yrs
1	2	3	4	5	6	7

3. How long have you been at <u>this</u> branch?

1-3 mos	3-6 mos	6-12 mos	1-2 yrs	2-5 yrs	5-10 yrs	10+ yrs
1	2	3	4	5	6	7

4. Approximate earnings from selling Real Estate
   1972 _____ 1973 _____ 1974 _____

5. Please report approximately any other income you had for these years
   1972 _____ 1973 _____ 1974 _____

6. What percentage of the following kinds of Real Estate did you sell in 1974?

   a. new residential ____%
   b. old residential ____%
   c. commercial ____%
   d. industrial ____%
   e. other (specify)_____ ____%
   total 100%

7. How do you spend your time each week?

   a. total hours on the job ____
   b. administrative work ____
   c. obtaining listings ____
   d. selling ____

8. How much time does it normally take you to close a listing contract? ____

9. How much time does it normally take you to close a Real Estate sale? ____

10. Do you normally follow the same work routine each week?

always		usually	occoasionally		seldom	never
1	2	3	4	5	6	7

11. How far ahead do you plan your work?

a few hours	a day at a time	several days	a week ahead	two weeks ahead	monthly	more than a month
1	2	3	4	5	6	7

12. How do you make your first contacts for sales and listings?

in person only		mostly in person	both ways equally		mostly by telephone	telephone only
1	2	3	4	5	6	7

13. How many personal contacts do you normally make each day? _____

14. How many telephone contacts do you normally make each day? _____

15. When are you willing to see customers?

7 days a week 24 hrs	7 days and evenings	week days and evenings	week days or evenings	four days or evenings	three days or evenings	less than 3 days or evenings
1	2	3	4	5	6	7

16. How important is it to obtain realistically priced listings (near the market value)?

extremely important	important		uncertain	not important		completely unimportant
1	2	3	4	5	6	7

17. How important is it to obtain offers near the listed price?

extremely important	important		uncertain	not important		completely unimportant
1	2	3	4	5	6	7

18. Do you provide extra services, gifts or follow up to buyers?

always	usually	occasionally	not usually	never
1	2	3	4	5	6	7

If you do provide "extras" please specify_____

_____

19. In general, what do you think of the company you work for?

excellent company	better than average		average company	worse than average		bad company
1	2	3	4	5	6	7

20. What do you think of the Real Estate industry as a whole?

excellent industry	better than average		average industry	worse than average		bad industry
1	2	3	4	5	6	7

21. What do you think of other Real Estate salespeople?

all very competent professionals	most are competent professionals		have no opinion	most are incompetent unprofessional		all are incompetent unprofessional
1	2	3	4	5	6	7

22. Do you enjoy selling Real Estate?

very much	some		uncertain	not very much		dislike intensely
1	2	3	4	5	6	7

23. How do you think the typical Real Estate salesperson feels about his work?

most like it very much	some like it		uncertain	most don't like it		most hate their work
1	2	3	4	5	6	7

24. Do you want to make a career of selling Real Estate?

definitely yes		possibly		uncertain	not likely		definitely not
1	2	3	4	5	6	7	

25. To what extent do you feel a Real Estate salespersons appearance affects his performance?

large extent		somewhat		uncertain	not very much		not at all
1	2	3	4	5	6	7	

26. How much do you know about the legal aspects of Real Estate?

everything		most aspects		some aspects	not very much		nothing at all
1	2	3	4	5	6	7	

27. Are your sales concentrated in one or more geographic areas (neighborhoods)?

all sales concentrated		most sales concentrated		some sales concentrated	few sales concentrated		none concentrated
1	2	3	4	5	6	7	

28. Do you normally inspect a property before you show it?

always		usually		occasionally	seldom		never
1	2	3	4	5	6	7	

29. Do you inspect the neighborhood before showing a property?

always		usually		occasionally	seldom		never
1	2	3	4	5	6	7	

30. To what extent do you normally use M.L.S. and your companies listing service?

almost all M.L.S.		mostly M.L.S.		both about equally	mostly own company		almost all own company
1	2	3	4	5	6	7	

31. How useful are these items to you in obtaining listings?

	extremely useful		some use		little use		of no value
referals	1	2	3	4	5	6	7
by owner ads	1	2	3	4	5	6	7
signs	1	2	3	4	5	6	7
open house	1	2	3	4	5	6	7
cold calls	1	2	3	4	5	6	7
mailers	1	2	3	4	5	6	7
radio/T.V.	1	2	3	4	5	6	7

32. How useful are these items to you in selling property?

	extremely useful		some use		little use		of no value
referals	1	2	3	4	5	6	7
by owner ads	1	2	3	4	5	6	7
signs	1	2	3	4	5	6	7
open house	1	2	3	4	5	6	7
cold calls	1	2	3	4	5	6	7
mailers	1	2	3	4	5	6	7
radio/T.V.	1	2	3	4	5	6	7

33. What is the present level of sales training in this company not including the licensing course?

extremely high	very high		typical of R.E. firms	very low		extremely low
1	2	3	4	5	6	7

34. What is the present level of sales training in the industry as a whole?

extremely high	very high		typical of all industries	very low		extremely low
1	2	3	4	5	6	7

35. How much sales training do you think is needed to sell Real Estate?

great deal more	more than at present		present amount	less than at present		great deal less
1	2	3	4	5	6	7

36. How much sales training do you recieve now?

_____

_____

37. Your name _____

Age _____ Sex _____

Married _____ Single _____ Other _____

Number of dependants _____

38. Your Education:

grade nine or less	some high school	complete high school	some technical school	complete tech. school	some college	complete college
1	2	3	4	5	6	7

39. Please make any additional comments on sales training in general, on this questionnaire, or notes to explain a specific answer to a question. Please use the backs of the pages if you need more room for your comments.

MANAGERS GENERAL QUESTIONNAIRE

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THANK YOU VERY MUCH FOR YOUR HELP.

James Mitchelson

1. How long have you worked in the Real Estate industry?

1-3 mos	3-6 mos	6-12 mos	1-2 yrs	2-5 yrs	5-10 yrs	10+ yrs
1	2	3	4	5	6	7

2. How long have you been with your present employer?

1-3 mos	3-6 mos	6-12 mos	1-2 yrs	2-5 yrs	5-10 yrs	10+ yrs
1	2	3	4	5	6	7

3. How long have you been at <u>this</u> branch?

1-3 mos	3-6 mos	6-12 mos	1-2 yrs	2-5 yrs	5-10 yrs	10+ yrs
1	2	3	4	5	6	7

4. How many salespeople do you have working for you? _____

5. What proportion of your branch salesforce is full time? _____%

6. Approximately how much Real Estate is sold through this office?

	total sales	gross commissions
1972	_____	_____
1973	_____	_____
1974	_____	_____

7. Do you encourage your salespeople to plan their work ahead?

always	usually	occasionally	seldom	never
1	2 3	4	5 6	7

8. How many hours per week do your salespeople spend in training courses not including the licensing course? _____

9. How do you normally spend your time?

a. selling on your own _____%
b. assisting salespeople _____%
c. administative duties _____%
d. training salespeople _____%
e. other (specify)

_____ _____%

total 100%

10. How many hours per week do you normally spend on the job? _____

11. How many hours per week do you normally spend doing administrative and paper work? _____

12. To what extent do you follow a work routine?

always	usually	occasionally	seldom	never
1	2 3	4	5 6	7

13. To what extent does your salesforce follow a work routine?

always	usually	occasionally	seldom	never
1	2 3	4	5 6	7

14. What are the hours for your branch office? _____

_____

15. How far ahead do you plan your work?

a few hours	a day at a time	several days	weekly plan	two weeks	monthly	more than a month
1	2	3	4	5	6	7

16. What do you think of the sales training given by your company in comparison to other Real Estate firms?

extremely good	better than most		uncertain	worse than most		extremely bad
1	2	3	4	5	6	7

17. What do you think of the sales training in the industry as a whole?

extremely good	better than most		uncertain	worse than most		extremely bad
1	2	3	4	5	6	7

18. Are there any weak points in your firms sales training programs?

_____

_____

19. Are there any weak points in the industries sales training programs?

_____

_____

20. How would you rate your branch salespeople on general performance compared with salespeople from other firms?

all very competent professionals	most are competent professionals		have no opinion	most are incompetent unprofessional		all are incompetent unprofessional
1	2	3	4	5	6	7

21. How would you rate Real Estate salespeople in the industry as a whole?

all very competent professionals	most are competent professionals		have no opinion	most are incompetent unprofessional		all are incompetent unprofessional
1	2	3	4	5	6	7

22. To what extent does a salespersons appearance affect his sales performance?

large extent	some		uncertain	hardly at all		not at all
1	2	3	4	5	6	7

23. To what extent do you insist upon the listing of properties near the market value?

always	usually		occasionally	seldom		never
1	2	3	4	5	6	7

24. To what extent do you insist upon your salespeople getting offers near the listed price?

always	usually		occasionally	seldom		never
1	2	3	4	5	6	7

25. Are the sales from your branch generally concentrated in one or a few geographic areas? (neighborhoods)

all sales concentrated		most sales concentrated		some sales concentrated	few sales concentrated		none concentrated
1		2	3	4	5	6	7

26. Do you think most of your Real Estate salespeople like their work?

all like it		most like it		uncertain	most dislike it		all dislike it
1		2	3	4	5	6	7

27. To what extent does your company provide help in advertising?

large extent		some		uncertain	hardly at all		not at all
1		2	3	4	5	6	7

28. How useful are these items in obtaining listings?

	extremely useful		some use		little use		of no value
referals	1	2	3	4	5	6	7
by owner ads	1	2	3	4	5	6	7
signs	1	2	3	4	5	6	7
open house	1	2	3	4	5	6	7
cold calls	1	2	3	4	5	6	7
mailers	1	2	3	4	5	6	7
radio/T.V.	1	2	3	4	5	6	7

29. How useful are these items in selling property?

	extremely useful		some use		little use		of no value
referals	1	2	3	4	5	6	7
by owner ads	1	2	3	4	5	6	7
signs	1	2	3	4	5	6	7
open house	1	2	3	4	5	6	7
cold calls	1	2	3	4	5	6	7
mailers	1	2	3	4	5	6	7
radio/T.V.	1	2	3	4	5	6	7

30. To what extent does your company encourage salespeople to take sales training courses?

large extent		some		uncertain	hardly at all		not at all
1		2	3	4	5	6	7

31. Your name _____

Age _____ Sex _____

Married _____ Single _____ Other _____

Number of Dependants _____

32. Your Education:

grade nine or less	some high school	complete high school	some technical school	complete tech. school	some college	complete college
1	2	3	4	5	6	7

33. Please make any additional comments on sales training in general, on this questionnaire, or notes to explain a specific answer to a question. Please use the backs of the pages if you need more room for your comments.

SALESAGENTS FILM QUESTIONNAIRE

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THANK YOU VERY MUCH FOR YOUR HELP.

James Mitchelson

1. How many times have you seen this film before today? ___

2. Would there be any benefit in seeing it again? (circle one number)

definitely yes		possibly		uncertain	not likely	definitely not
1	2	3	4	5	6	7

3. How much time should elapse between showings?

one day	two days	3-4 days	one week	2-3 weeks	one month	longer
1	2	3	4	5	6	7

4. Was there anything in <u>this</u> film that might help increase your overall performance?

definitely yes		possibly		uncertain	not likely	definitely not
1	2	3	4	5	6	7

5. Have any of the previous films <u>actually</u> increased the number of listings you have obtained?

definitely yes		possibly		uncertain	not likely	definitely not
1	2	3	4	5	6	7

6. Have any of the previous discussions <u>actually</u> increased the number of listings you have obtained?

definitely yes		possibly		uncertain	not likely	definitely yes
1	2	3	4	5	6	7

7. Have any of the previous films <u>actually</u> increased your sales?

definitely yes		possibly		uncertain	not likely	definitely yes
1	2	3	4	5	6	7

8. Have any of the previous discussions <u>actually</u> increased your sales?

definitely yes		possibly		uncertain	not likely	definitely not
1	2	3	4	5	6	7

9. Who would benefit most from seeing this film?

new salespeople only	more new than established	both new and established	more established than new	established salespeople only
1	2	3	4	5	6	7

10. In general, what did you think of this film?

excellent film		good		uncertain	poor	very poor
1	2	3	4	5	6	7

11. When is the best time of day to show a film of this nature?

_____

12. Please evaluate the length of this film:

much too long	too long	about right	too short	much too short
1	2 3	4	5 6	7

13. Is there a need for a discussion period after this film?

absolutely yes	possibly	uncertain	not likely	absolutely not
1	2 3	4	5 6	7

14. How important are the following items to the Real Estate salesperson?

	extremely important		some importance		little importance		not important
obtaining listings	1	2	3	4	5	6	7
sales aids	1	2	3	4	5	6	7
advertising	1	2	3	4	5	6	7
legal knowledge	1	2	3	4	5	6	7
product knowledge	1	2	3	4	5	6	7

15. How well does this film cover these items?

	extremely well		fairly well		poorly		not at all
obtaining listings	1	2	3	4	5	6	7
sales aids	1	2	3	4	5	6	7
advertising	1	2	3	4	5	6	7
legal knowledge	1	2	3	4	5	6	7
product knowledge	1	2	3	4	5	6	7

16. How often do you feel the following items should be reviewed?

	each week	2-3 weeks	3-4 weeks	each month	2-3 mos	half yearly	each year
obtaining listings	1	2	3	4	5	6	7
sales aids	1	2	3	4	5	6	7
advertising	1	2	3	4	5	6	7
legal knowledge	1	2	3	4	5	6	7
product knowledge	1	2	3	4	5	6	7

17. Please add any additional comments about the good and bad points of the film and the presentation. Your general comments will be very helpful. Please use the backs of the pages if you need additional room.

18. Your name _____

MANAGERS FILM QUESTIONNAIRE

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THANK YOU VERY MUCH FOR YOUR HELP.

James Mitchelson

1. How many times have you seen this film before today? ___

2. Would there be any benefit in seeing it again? (circle one number)

definitely yes		possibly		uncertain	not likely		definitely not
1	2		3	4	5	6	7

3. How much time should elapse between showings?

one day	two days	3-4 days	one week	2-3 weeks	one month	longer
1	2	3	4	5	6	7

4. Was there anything in <u>this</u> film that might help increase your overall performance?

definitely yes		possibly		uncertain	not likely		definitely not
1	2		3	4	5	6	7

5. Have any of the previous films <u>actually</u> increased the number of listings you have obtained?

definitely yes		possibly		uncertain	not likely		definitely not
1	2		3	4	5	6	7

6. Have any of the previous discussions <u>actually</u> increased the number of listings you have obtained?

definitely yes		possibly		uncertain	not likely		definitely yes
1	2		3	4	5	6	7

7. Have any of the previous films <u>actually</u> increased your sales?

definitely yes		possibly		uncertain	not likely		definitely yes
1	2		3	4	5	6	7

8. Have any of the previous discussions <u>actually</u> increased your sales?

definitely yes		possibly		uncertain	not likely		definitely not
1	2		3	4	5	6	7

9. Who would benefit most from seeing this film?

new salespeople only		more new than established		both new and established	more established than new		established salespeople only
1	2		3	4	5	6	7

10. In general, what did you think of this film?

excellent film		good		uncertain	poor		very poor
1	2		3	4	5	6	7

11. When is the best time of day to show a film of this nature?

_____

12. Please evaluate the length of this film:

much too long	too long		about right		too short	much too short
1	2	3	4	5	6	7

13. Is there a need for a discussion period after this film?

absolutely yes	possibly		uncertain		not likely	absolutely not
1	2	3	4	5	6	7

14. How important are the following items to the Real Estate salesperson?

	extremely important		some importance		little importance		not important
obtaining listings	1	2	3	4	5	6	7
sales aids	1	2	3	4	5	6	7
advertising	1	2	3	4	5	6	7
legal knowledge	1	2	3	4	5	6	7
product knowledge	1	2	3	4	5	6	7

15. How well does this film cover these items?

	extremely well		fairly well		poorly		not at all
obtaining listings	1	2	3	4	5	6	7
sales aids	1	2	3	4	5	6	7
advertising	1	2	3	4	5	6	7
legal knowledge	1	2	3	4	5	6	7
product knowledge	1	2	3	4	5	6	7

16. How often do you feel the following items should be reviewed?

	each week	2-3 weeks	3-4 weeks	each month	2-3 mos	half yearly	each year
obtaining listings	1	2	3	4	5	6	7
sales aids	1	2	3	4	5	6	7
advertising	1	2	3	4	5	6	7
legal knowledge	1	2	3	4	5	6	7
product knowledge	1	2	3	4	5	6	7

17. Please add any additional comments about the good and bad points of the film and the presentation. Your general comments will be very helpful. Please use the backs of the pages if you need additional room.

18. Your name _____

APPENDIX 3

DATA CARD FORMATS

EXHIBIT 1

SALESAGENTS GENERAL QUESTIONNAIRE INPUT FORMAT

```
Card 1 (14x, 3F1.0, 12F3.0, 5F2.0, 3F1.0, /,
Card 2  14x, 2F2.0, 33F1.0, F2.0, 6F1.0
```

EXHIBIT 2

MANAGERS GENERAL QUESTIONNAIRE INPUT FORMAT

```
Card 1 (14x, 3F1.0, 8F3.0, F1.0, F2.0, 5F3.0, 2F2.0, /
Card 2  14x, 28F1.0, F2.0, 6F1.0)
```

EXHIBIT 3

SALESAGENTS FILM QUESTIONNAIRE INPUT FORMAT

```
Card 1 (14x, 28F1.0)
```

EXHIBIT 4

MANAGERS FILM QUESTIONNAIRE INPUT FORMAT

```
Card 1 (14x, 28F1.0)
```

APPENDIX 4

PROGRAM LISTINGS

```
$RUN *SPSS
RUN NAME        GENSTAT
VARIABLE LIST   V1 TO V128
INPUT MEDIUM    CARD
INPUT FORMAT    FIXED    (14X,3F1.0,12F3.0,5F2.0,3F1.0,/,
                14X,2F2.0,33F1.0,F2.0,4F1.0,1X,F1.0,/,
                14X,3F1.0,12F3.0,5F2.0,3F1.0,/,
                14X,2F2.0,33F1.0,F2.0,4F1.0,1X,F1.0)
# OF CASES      24
VAR LABELS      V1 TO V128
RECODE          V1 TO V128 (BLANK=-1)
MISSING VALUES  V1 TO V128 (-1)
MARGINALS       V15,V79,V10,V74,V11,V75,V12,V76,V13,V77,V14,V78,V16,V80,V17,V81,
                V18,V82,V21,V85,V22,V86,V24,V88,V25,V89,V41,V105,V29,V93,V26,V90,
                V19,V83,V20,V84,V23,V87,V27,V91,V28,V92,V30,V94,V31,V95,V32,V96,
                V33,V97,V34,V98,V35,V99,V36,V100,V64,V128,V37,V101,V39,V103,V40,
                V104,V38,V102,V56,V120,V57,V121,V58,V122,V1,V65,V2,V66,V3,V67,
                V42,V106,V43,V107,V44,V108,V45,V109,V46,V110,V47,V111,V48,V112,
                V49,V113,V50,V114,V51,V115,V52,V116,V53,V117,V54,V118,V55,V119
STATISTICS      1,3,4,5,6,10,11
READ INPUT DATA
                DATA LISTING OCCURS HERE, SEE APPENDIX 5
FINISH
```

EXHIBIT 1

Program "MARGINALS"

EXHIBIT 1 continued:

Program "MARGINALS"

```
$RUN *SPSS
RUN NAME       FILMSTAT
VARIABLE LIST  V1 TO V28
SUBFILE LIST   Q1,Q2,Q3,Q4,Q5,Q6,Q7,Q8,Q9,Q10
INPUT MEDIUM   CARD
INPUT FORMAT   FIXED (14X,28F1.0)
# OF CASES     12,22,20,19,20,18,20,11,10,14
VAR LABELS     V1 TO V28
RECODE         V1 TO V28 (BLANK=-1)
MISSING VALUES V1 TO V28 (-1)
PROCESS SBFILESEACH
MARGINALS      ALL
STATISTICS     1,2,3,5,10,11
READ INPUT DATA
        DATA LISTING OCCURS HERE, SEE APPENDIX 5
FINISH
```

```
$RUN *SPSS
RUN NAME          CROSSTAB
VARIABLE LIST     V1 TO V128
INPUT MEDIUM      CARD
INPUT FORMAT      FIXED    (14X,3F1.0,12F3.0,5F2.0,3F1.0,/,
                  14X,2F2.0,33F1.0,F2.0,4F1.0,1X,F1.0,/,
                  14X,3F1.0,12F3.0,5F2.0,3F1.0,/,
                  14X,2F2.0,33F1.0,F2.0,4F1.0,1X,F1.0)
# OF CASES        24
VAR LABELS        V1 TO V128
RECODE            V1 TO V128 (BLANK=-1)
MISSING VALUES    V1 TO V128 (-1)
CROSSTABS         V15,V79,V16,V80,V17,V81,V18,V82,V21,V85,V22,V86,V24,V88,V25,V89,
                  V41,V105,V29,V93,V26,V90,V19,V83,V20,V84,V23,V87,V27,V91,V28,V92,
                  V30,V94,V31,V95,V32,V96,V33,V97,V34,V98,V35,V99,V36,V100,V37,
                  V101,V39,V103,V40,V104,V38,V102,V56,V120,V57,V121,V58,V122,BY
                  V1,V59,V60/V42,V106,V43,V107,V44,V108,V45,V109,V46,V110,V47,V111,
                  V48,V112,V49,V113,V50,V114,V51,V115,V52,V116,V53,V117,V54,V118,
                  V55,V119 BY V1,V59,V64
STATISTICS        6,7
READ INPUT DATA
                  DATA LISTING OCCURS HERE, SEE APPENDIX 5
FINISH
```

EXHIBIT 2

Program "CROSSTABS"

```
$RUN *SPSS
RUN NAME          CORRSIX
VARIABLE LIST     V1 TO V128
INPUT MEDIUM      CARD
INPUT FORMAT      FIXED    (14X,3F1.0,12F3.0,5F2.0,3F1.0,/,
                  14X,2F2.0,33F1.0,F2.0,4F1.0,1X,F1.0,/,
                  14X,3F1.0,12F3.0,5F2.0,3F1.0,/,
                  14X,2F2.0,33F1.0,F2.0,4F1.0,1X,F1.0)
# OF CASES        24
VAR LABELS        V1 TO V128
RECODE            V1 TO V128 (BLANK=-1)
MISSING VALUES    V1 TO V128 (-1)
NONPAR CORR       V15,V79,V16,V80,V17,V81,V18,V82,V21,V85,V22,V86,V24,V88,V25,V89,
                  V41,V105,V29,V93,V26,V90,V19,V83,V20,V84,V23,V87,V27,V91,V28,V92,
                  V30,V94,V31,V95,V32,V96,V33,V97,V34,V98,V35,V99,V36,V100,V37,
                  V101,V39,V103,V40,V104,V38,V102,V56,V120,V57,V121,V58,V122,
                  V42,V106,V43,V107,V44,V108,V45,V109,V46,V110,V47,V111,
                  V48,V112,V49,V113,V50,V114,V51,V115,V52,V116,V53,V117,V54,V118,
                  V55,V119 WITH V1,V59,V60,V64,V6,V61
OPTIONS           5
READ INPUT DATA
                  DATA LISTING OCCURS HERE, SEE APPENDIX 5
FINISH
```

EXHIBIT 3

Program "NONPAR CORR"

EXHIBIT 3 continued:

Program "NONPAR CORR"

```
$RUN *SPSS
RUN NAME      CORRALL
VARIABLE LIST V1 TO V128
INPUT MEDIUM  CARD
INPUT FORMAT  FIXED    (14X,3F1.0,12F3.0,5F2.0,3F1.0,/,
              14X,2F2.0,33F1.0,F2.0,4F1.0,1X,F1.0,/,
              14X,3F1.0,12F3.0,5F2.0,3F1.0,/,
              14X,2F2.0,33F1.0,F2.0,4F1.0,1X,F1.0)

# OF CASES    24
VAR LABELS    V1 TO V128
RECODE        V1 TO V128 (BLANK=-1)
MISSING VALUES V1 TO V128 (-1)
NONPAR CORR   V15,V79,V16,V80,V17,V81,V18,V82,V21,V85,V22,V86,V24,V88,V25,V89,
              V41,V105,V29,V93,V26,V90,V19,V83,V20,V84,V23,V87,V27,V91,V28,V92,
              V30,V94,V31,V95,V32,V96,V33,V97,V34,V98,V35,V99,V36,V100,V37,
              V101,V39,V103,V40,V104,V38,V102,V56,V120,V57,V121,V58,V122,
              V42,V106,V43,V107,V44,V108,V45,V109,V46,V110,V47,V111,
              V48,V112,V49,V113,V50,V114,V51,V115,V52,V116,V53,V117,V54,V118,
              V55,V119
              5
OPTIONS
READ INPUT DATA
              DATA LISTING OCCURS HERE, SEE APPENDIX 5

FINISH
```

```
$RUN *SPSS
RUN NAME          PARTCORR
VARIABLE LIST     V1 TO V128
INPUT MEDIUM      CARD
INPUT FORMAT      FIXED    (14X,3F1.0,12F3.0,5F2.0,3F1.0,/,
                  14X,2F2.0,33F1.0,F2.0,4F1.0,1X,F1.0,/,
                  14X,3F1.0,12F3.0,5F2.0,3F1.0,/,
                  14X,2F2.0,33F1.0,F2.0,4F1.0,1X,F1.0)
# OF CASES        24
VAR LABELS        V1 TO V128
RECODE            V1 TO V128 (BLANK=-1)
MISSING VALUES    V1 TO V128 (-1)
PARTIAL CORR      V59 WITH V41 BY V1 (1)/ V22 WITH V25 BY V59,V1 (1)/
                  V56 WITH V20 BY V1 (1)/ V1 WITH V26 BY V59 (1)/
                  V1 WITH V29 BY V6 (1)/ V30 WITH V33 BY V6 (1)/
                  V30 WITH V35 BY V59 (1)/ V31 WITH V35 BY V59 (1)/
                  V37 WITH V1 BY V59 (1)/ V57 WITH V37 BY V1,V59 (1)/
                  V57 WITH V38 BY V1,V59 (1)
OPTIONS           2
READ INPUT DATA
                  DATA LISTING OCCURS HERE, SEE APPENDIX 5
FINISH
```

EXHIBIT 4

Program "PART CORR"

```
$SOURCE DERS:NONP05
     AGGREGATE PAIRED SAMPLE ANALYSIS
    2    26    25    25     1     7     1
(59X,2F2.0,3F1.0,/,18X,F1.0,3X,4F1.0,3X,3F1.0,X,2F1.0,X,3F1.0,X,F1.0,X,F1.0,1X,
3F1.0,2X,2F1.0)

                DATA LISTING OCCURS HERE, SEE APPENDIX 5

/*
```

EXHIBIT 5

PROGRAM "NONPØ5"

APPENDIX 5

DATA LISTINGS

SALESAGENTS GENERAL QUESTIONNAIRE

DATA LISTING

```
01  1110000000060901101900000000001000000661246080004235
    0450212211211113211513111311511331141221100 13
12  1110000000000000000000000800000000200100204040201234
    4025211111211114511511113331511553242221100 13
01  4440000001500000000000001000000000000100801010000416
    0000312211412124446716627661744763362322100 43
12  4440000001500000000000001000000000000100801010000416
    0000312215512124446712627361744763362322100 43
01  1110000000000000000000000000000000000000000000323
    1005223321211114411412132431411242124292100 23
12  1110000000000000000000000000000000000000000000123
    2010111223121143336111314114122323542921002 3
01  1110000000000000000000000000000000000000000000240
    0000111711301114220101100010110000024321003 3
12  1110000000000075080100000000000000000012040404000222
    4050211542211113211413113331311222442432100 33
01  1110000000000000000025000000000000000030000000000220
    0000112412211116522414325531311144314351210003
12  1110000000000000000550000000000000000442012070000224
    1520112412211114411412111351311136153512100 03
01  5550701601500000000000001000000000000100204040304122
    3010211111212112222415111351511135252551100 22
12  5550701601500000000000001000000000000120406020304222
    1510311110211112122415111311311153151551100 22
01  1110000000001801902160500500000000000000000000000000
    0000111411111114011013113361313300144651100 07
12  1110000000001801902160001000000000000400530050101541
    2002113411211114311612221171221117134651100 07
01  4440000500000000000000001000000000000400515200101322
    1010212222322214423413332424412444251252100 06
12  4440000000450000000000010990000000000401010200201422
    1003211121311414222533132313312222351252100 06
01  1110000000000000000000000000000000000600030300303235
    0505112011411113213765221675513556262191010 03
12  1110000000000000000900000000000000000501214240000326
    1030222312441124424614222341412534232191010 03
01  4440000000500000000500000900000000100452005200202335
    0312312222322113222515333151531355242591100 16
12  4440000000500000000500000900000000100451020150302254
    0310311222312113322413311251532135352591100 16
01  5550100601000700750800000850150000000200608060101134
    1004113212311112211413221541212145223441100 32
12  5550100601000800800800500850100000000060203010101332
    0505112412211112211412111251211145224441100 32
01  2110000000000000000000000000000000000004505202000003 4
```

```
      1520411213211113222413442241333235343572100 02
12    2110000000000000000000000000000000000402110090204232
      1505312212211113222415211551531155343582100 02
01    4440000000450000500200000950000000050480024240302433
      0201112111211112271733217321711555142602100 03
12    4440000000450000500200000900000000100451505250202422
      0302211322211112521514117773711777224602100 3
01    2220000000300000000000001000000000000000000000248335
      0000412222221213322515122271412664131382100 05
      MISSING DATA
      MISSING DATA
01    3330000000000000000000000000000000000000000000201224
      1030311441211116522413151371411567461342100 45
      MISSING DATA
      MISSING DATA
01    4440000000700000000000250250000000500502020100101226
      0110112412412114422611313531311351373241010 12
      MISSING DATA
      MISSING DATA
01    1110000000000000001600000000000000000601530150203313
      1010322414513124323413423453511553253281100 23
      MISSING DATA
      MISSING DATA
01    4440000000000000000000500400000000100000000000101444
      1050313111211112212613111241111124224192100 02
      MISSING DATA
      MISSING DATA
01    3310000000000000005500010000000000004800242448024 24
      0304211633313122522526662663663467241301010 07
      MISSING DATA
      MISSING DATA
01    1110000000000550650800001000000000000000000000202335
      0520112332311113322514121361412236232252001 02
      MISSING DATA
      MISSING DATA
01    3320000000600000000000001000000000000201005050101232
      0410311221121111456641212477171171734291100 03
      MISSING DATA
      MISSING DATA
01    5550000400850000000000001000000000000240012120202234
      0606412124322423222535153573515555352292100 03
      MISSING DATA
      MISSING DATA
01    1110000000001461842200000000000000000000000000000000
      0000222442341112000012345661423666000551100 04
      MISSING DATA
      MISSING DATA
01    1110000000000000000000000000000000000000000000000234
      0515212123322213222355112444211244133502100 06
      MISSING DATA
      MISSING DATA
```

SALESAGENTS FILM QUESTIONNAIRE

DATA LISTING

```
02  216144224114211121114721133 1
02  016122224114311111117721111 1
02  055144443213212211122212222 1
02  047711114114111111111111111 1
02  124122224214111221144421544 1
02  017133334214212231444441333 1
02  067144444114613121777775655 6
02  257121214314313321777771221 1
02  111100004114113341123211224 1
02  014122224114411111277722112 2
02  025243434214411111444424444 4
02  416122224214211111114414444 4
03  426144224114111131115511224 1
03  113224234114211121112311222 1
03  127277774214612143117714444 4
03  125144444114211321114411233 1
03  141222231147141111177116411
03  063244444214511131133312144 1
03  016144444214211111112521111 1
03  416212214214111111117611111 1
03  237233334214311221227721111 1
03  055244444214012211122211222 1
03  914111114115111111111111111 1
03  111131114214312111177311111 1
03  016100004114412121112211122 1
03  127111112214312221110011333 1
03  116122224114311121114411234 1
03  213244544214311211424411312 2
03  114132114114211211117711222 1
03  011100004114113341124421333 1
03  214121124214311111122111111 1
03  236233344214511111124414444 4
03  257122224214212211113215447 3
03  417121114214111111117715555 5
04  416144114114111131717711113 1
04  113122223113212231111312233 1
04  127277774314312142736724446 4
04  016134344114211131117711144 1
04  314123322114212111411711111
04  135266664214211131517714244 1
04  016144444214111111741111113 1
04  226242224214211111314441212 1
04  056144440213311121214441122 1
04  116100004114412221212212277 1
04  116111113314312221227711222 1
04  117122224114212231612611334 1
04  914111114115111111111111111 1
```

```
04  1142455541142122114423112211
04  1141221141142133217777112221
04  1111000041141122311344112351
04  2261333242143111113131152122
04  1263333242143111114444144444
04  4171111141141111114144144444
04  1141111142141112217177311222
05  1131111141142111211153111121
05  0363777743143121427777744444
05  0361344441143143411267312441
05  0141222242143121113127214 1
05  0161466741141113317177544444
05  0151333343145123212477712441
05  0351443342146111312334112141
05  0171333343142122212245113341
05  0141111141151113111773122111
05  1513421442144111114437312111
05  0161000041144122412237113271
05  0261111122133122213777312221
05  0131455541143122113344312111
05  0141111142143144117777713311
05  1111000041145132411224213251
05  2522224142141111212212242222
05  1361433243144111114577744444
05  0371444442143111112347635461
05  0162222242141122111244144444
06  0161222241142111317177111141
06  0151444441124133411277112231
06  0264777742143121427777744444
06  1161444441146122316177114441
06  0161464451142111117777145444
06  1261111142121111117777711421
06  1262111241142111214147311121
06  0677334444147123217777711221
06  1663003353146111213377211121
06  0161222242141111212552511141
06  0262221142143111117477311111
06  0262000041143113512277311171
06  0171333343143111211444412421
06  0352444551143121117677312211
06  0251111142142133117777713321
06  0111000041142123411135113341
06  0141224341142111113233311111
06  0564333343145111117757156463
06  0151444442141111111111111111
06  2251112222142122317777323344
07  0161111141141111311137111141
07  0251222241124122311343122441
07  2712777742123121437777744444
07  0141441141143133311333113321
07  0171111143123121117377311141
07  1474444443145122213677612221
07  1251443342145111211137112341
07  0161000041143117442447112771
07  1361111132143122211777712221
07  1171333341143122211444413331
07  0151444441142112217777312211
07  3251111141142133117777713311
07  0111000041142133513225213341
07  5352322241143111111131131111
```

```
07   037122224114311111137473544461
07   116222224114111121135514444 4
07   016122224115111111222224444 4
07   326111114214611121727744454
08   316111114114111131113711114 1
08   446245224113412231122211224 1
08   023377774214312142777724444 4
08   456232324114312211143311221 1
08   516142224114211211144114411
08   166242222314112111325524433 1
08   116121114312111111234111111
08   337133334114313321114411234 1
08   225144444114511111113311122 1
08   915111144115111111115111111 1
08   136100004114411711117714177 1
08   236111113214312221137731222 1
08   217122224114212221112211222 1
08   325255663214312111145711221 1
08   215111114214213311114711331 1
08   211100004114213341124421234 1
08   525332344114311111112111111 1
08   357333334314311111115714436 1
08   316222224214111121115514444 4
08   016111114114111111222224444 4
09   416111114114111131311711114 1
09   416122244114212231112312223 1
09   414122224114212211312131222 1
09   425111114214211111525511114 1
09   436322224214211121414411111 1
09   215144334114511111112211121 1
09   316122224114411771117714144 1
09   117122224114212221722711222 1
09   115155444114511111454421221 1
09   214111114114213311777711331 1
09   147333334214311111337724546 1
10   014122222114212221222211333 1
10   014111224214112221732741224 1
10   135344334314511111447731112 1
10   914111124114111311115511144 1
10   216133334114411471112771177 1
10   117122224314212221223411232 1
10   114255554114112111243331221 1
10   114111114114212311777771231 1
10   127222224314111121555754444 4
10   016111114114111117111771444 4
11   116111114114211131717711114 1
11   215177774114212142555544444 4
11   316144444114412231717771344 1
11   127121214214211111773371154
11   166144334114511111114411221 1
11   314111144116111111117711111 1
11   216133334114431773547111777 1
11   117122224114111211444441222 1
11   115255554114512111747731221 1
11   116211114214212311777771232 1
11   336224342114511111434441111 1
11   027333334314311111352714556 2
11   017144114213311111111114555 1
11   116111114114111171117714444 4
```

WILCOXON MATCHED-PAIRS

DATA LISTING

```
01  1110000000060901101900000000001000000661246080004235
    0450212211211113211513111311511331141221100 13
12  1110000000000000000000000800000000200100204040201234
    4025211111211114511511113331511553242221100 13
01  4440000001500000000000001000000000000100801010000416
    0000312211412124446716627661744763362321000 43
12  4440000001500000000000001000000000000100801010000416
    0000312215512124446712627361744763362321000 43
01  1110000000000000000000000000000000000000000000323
    1005223321211114411412132431411242124292100 23
12  1110000000000000000000000000000000000000000000123
    2010111222312114333611131411412232354292100 23
01  1110000000000000000000000000000000000000000000000240
    0000011171130111422010110001011000002432100 33
12  1110000000000075080100000000000000000001204040400002 22
    4050211542211113211413113331311222442432100 33
01  1110000000000000000025000000000000000003000000000220
    0000112412211116522414325531311443143512100 03
12  1110000000000000000055000000000000000044201207000022 4
    1520112412211114411412111351311136153512100 03
01  5550701601500000000000001000000000000100204040304122
    3010211111212112222415111351511135252551100 22
12  5550701601500000000000001000000000000120406020304222
    1510311110211112122415111311311153151551100 22
01  1110000000001801902160500500000000000000000000000000
    0000111411111114011013113361313300144651100 07
12  1110000000001801902160001000000000000400530050101541
    2002113411211114311612221171221117134651100 07
01  4440000500000000000000001000000000000400515200101322
    1010212222322214423413332424412444251252100 06
12  4440000000450000000000010990000000000401010200201422
    1003211121311414222533132313312222351252100 06
01  1110000000000000000000000000000000000600030300303235
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12  1110000000000000000090000000000000000050121424000032 6
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01  2110000000000000000000000000000000000045052020000034
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12  2110000000000000000000000000000000000040211009020423 2
    1505312212211113222415211551531155343582100 02
01  4440000000450000500200000950000000050480024240302433
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12  4440000000450000500200000900000000100451505250202422
    0302211322211112521514117773711772246021003
```

APPENDIX 6

WILCOXON COEFFICIENTS FOR PROPOSITIONS

EXHIBIT 1

WORK HABITS AFFECT LISTINGS/SALES

Pair Number	T	N	H_o (at 5%)
1	4.0	6	accept
2	0.0	0	*
3	2.0	2	*
4	1.0	5	*
5	0.0	6	reject
6	2.5	5	*
7	0.0	9	reject
8	5.0	4	*
9	13.5	7	accept
10	13.0	7	accept
11	0.0	5	*
12	12.5	7	accept
13	7.5	7	accept

* N too small for significant results

EXHIBIT 2

CLIENT RELATIONS AFFECT LISTINGS/SALES

Pair Number	T	N	H_o (at 5%)
1	4.0	5	*
2	0.0	0	*
3	2.0	6	accept
4	2.5	5	*
5	0.0	3	*
6	2.0	4	*
7	0.0	4	*
8	0.0	3	*
9	8.0	6	accept
10	0.0	3	*
11	4.0	5	*
12	2.0	3	*
13	5.0	6	accept

* N too small for significant results

EXHIBIT 3

PERSONAL IMAGE AFFECTS LISTINGS/SALES

Pair Number	T	N	H_o (at 5%)
1	0.0	0	*
2	1.0	2	*
3	2.0	3	*
4	2.0	4	*
5	0.0	0	*
6	0.0	2	*
7	0.0	1	*
8	0.0	4	*
9	0.0	3	*
10	0.0	1	*
11	0.0	1	*
12	0.0	1	*
13	0.0	3	*

* N too small for significant results

EXHIBIT 4

PRODUCT KNOWLEDGE AFFECTS LISTINGS/SALES

Pair Number	T	N	H_o (at 5%)
1	0.0	4	*
2	0.0	0	*
3	1.0	5	*
4	6.0	7	accept
5	2.5	5	*
6	0.0	3	*
7	1.0	2	*
8	4.0	4	*
9	5.0	5	*
10	2.0	3	*
11	0.0	0	*
12	0.0	0	*
13	4.0	4	*

* N too small for significant results

EXHIBIT 5

ADVERTISING TECHNIQUES AFFECT LISTING/SALES

Pair Number	T	N	H_o (at 5%)
1	3.5	6	accept
2	0.0	2	*
3	0.0	9	reject
4	0.0	8	reject
5	12.0	9	accept
6	0.0	0	*
7	42.0	12	accept
8	8.0	9	accept
9	3.0	10	reject
10	3.0	7	reject
11	3.0	6	accept
12	18.0	11	accept
13	22.5	10	accept

* N too small for significant results